

December 18, 2003

Mr. Greg Smith  
North Carolina Department of Transportation  
Geotechnical Engineering Unit  
1589 Mail Service Center  
Raleigh, North Carolina 27699-1589

Reference: Preliminary Site Assessment  
Janice Andrews Property (Parcel #005)  
2215 Holloway Street  
Durham, Durham County, North Carolina  
NCDOT Project 8.1352402 (U-4010)  
WBS Element 35011.1.1  
Earth Tech Project No. 71465

Dear Mr. Smith:

Telephone

Earth Tech of North Carolina, Inc., (Earth Tech) has completed the Preliminary Site Assessment conducted at the above-referenced property. The work was performed in accordance with the Technical and Cost proposal dated October 8, 2003, and the North Carolina Department of Transportation's (NCDOT's) Notice to Proceed dated October 13, 2003. Activities associated with the assessment consisted of collecting soil samples for laboratory analysis. The purpose of this report is to document the field activities, present the laboratory analyses, and provide recommendations regarding the property.

919.854.6200

Facsimile

919.854.6259

### Location and Description

The Janice N. Andrews Property (Parcel #005) is located at 2215 Holloway Street (NC 98) in Durham, Durham County, North Carolina (Figure 1). This location is in the southwest quadrant of the intersection of Holloway Street and Southerland Street. Based on information supplied by the NCDOT and the site visit, Earth Tech understands that the site is a used car lot that was a former convenience store/gas station. No information was available regarding the number or location of any underground storage tanks (USTs), or whether any USTs have been closed at the property. The proposed right-of-way does not affect the building, but it encompasses most of the area in front of the building where a pump island would be expected.

Earth Tech reviewed the North Carolina Department of Environment and Natural Resources (NCDENR) Incident Management database and no incident number was listed for this location. Earth Tech also searched the UST registration database and found no facility identification number for the property address. Because of the probable former presence of USTs and potential for contamination, a Preliminary Site Assessment was requested to evaluate the soils within the right-of-way where storm sewer drain liners would be located.

## **Site Assessment Activities**

On October 23, 2003, Earth Tech mobilized to the site to conduct a Geoprobe® direct push investigation to evaluate soil conditions within the proposed right-of-way. Continuous sampling using direct push technology (Regional Probing of Raleigh, North Carolina) resulted in generally good recovery of soil samples from the direct-push holes. Soil samples were collected and contained in 4-foot long acetate sleeves inside the direct push sampler. Each of these sleeves was divided in half for soil sample screening. Each 2-foot interval was placed in a resealable plastic bag and the bag was set aside for a sufficient amount of time to allow volatilization of organic compounds from the soil to the bag headspace. The probe of a flame ionization detector/photo ionization detector (FID/PID) was inserted into the bag and the reading was recorded. After terminating the sample hole, the soil sample from the depth interval with the highest FID/PID reading was submitted to Prism Laboratories, Inc., in Charlotte, North Carolina, using standard chain-of-custody procedures. The laboratory analyzed the soil samples for total petroleum hydrocarbons (TPH) using extraction methods 3550 (diesel fuel/fuel oil) and 5030 (gasoline).

Seven direct-push holes (AN-1 through AN-7) were advanced within the right-of-way at the site to depths ranging from 4 to 8 feet (Figure 2 and Attachment A). Borings AN-1, AN-2, AN-6, and AN-7 were placed to evaluate soil conditions at the proposed drop inlet locations. Borings AN-3, AN-4, and AN-5 were located at equal intervals along the proposed drainage line (Attachment B). The lithology encountered by the direct-push samples generally was consistent throughout the site. The ground surface was covered with about 4 inches of asphalt and gravel. Below the surface treatment was either a medium to light chocolate brown silty clay or mottled medium brown, tan, and white silty clay. Borings AN-2 and AN-5 were terminated at equipment refusal at a depth 4 feet and boring AN-4 at a depth of 6.5 feet. All other borings were terminated at a depth of 8 feet, the maximum depth of the proposed drainage lines. No groundwater was observed in any of the borings. Based on field screening, soil samples from a variety of depths were submitted for laboratory analysis, which are summarized in Table 1. Because no groundwater was encountered, no groundwater sample was collected for analysis.

## **Analytical Results**

Based on the laboratory reports, summarized in Table 1 and presented in Attachment C, petroleum hydrocarbon compounds were detected in three of the seven soil samples collected from the site (Figure 3). Total petroleum hydrocarbons (TPH) concentrations identified as diesel fuel were detected in soil sample AN-1 at a concentration of 160 milligrams per kilogram (mg/kg) and in soil sample AN-5 at a concentration of 18 mg/kg. TPH concentrations identified as gasoline were detected in soil sample AN-1 at a concentration of 3600 mg/kg and in soil sample AN-2 at a concentration of 1.7 mg/kg. No other soil sample contained detectable TPH concentrations. According to the North Carolina Underground Storage Tank Section's Underground Storage Tank Closure Policy



dated August 24, 1998, the action level for TPH analyses is 10 mg/kg for both gasoline and diesel fuel. However, that agency's "Guidelines for Assessment and Corrective Action," dated April, 2001, does not allow for use of TPH analyses for confirmation of the extent of petroleum contamination or its cleanup. As a result, while TPH concentrations are no longer applicable in confirming if soil contamination is present, this analysis is a legitimate screening tool. Based on the TPH action level for UST closures, the assumed action level is 10 mg/kg. The soil sample from borings AN-1 and AN-5 contained TPH concentrations above the 10 mg/kg assumed action level.

### **Conclusions and Recommendations**

A Preliminary Site Assessment was conducted to evaluate the Janice N. Andrews Property (Parcel #005) located at 2215 Holloway Street (NC 98) in Durham, Durham County, North Carolina. A total of seven soil borings were advanced to evaluate the soil conditions on the proposed right-of-way. The laboratory reports of three of the seven soil samples from these borings suggest that diesel fuel or gasoline is present above the detection limits. **TPH concentrations above the assumed action level of 10 mg/kg were present in soil samples from borings AN-1 and AN-5.** No groundwater sample was collected for analysis to evaluate the groundwater conditions.

To evaluate the volume of soil requiring possible remediation, an isoconcentration map for TPH concentrations above 10 mg/kg (Figure 3) was constructed using the analytical data. The volume of potentially contaminated soil for this site was estimated based on the 10 mg/kg isoconcentration contours. From this map, two areas of potential contamination are present, one at boring AN-1 and one at boring AN-5.

The analytical results of the soil sample from boring AN-1 indicate a diesel fuel concentration of 160 mg/kg and a gasoline concentration of 3600 mg/kg. The soil sample from boring AN-3 contained no detectable TPH concentrations, thus indicating that the contamination is likely confined to the area surrounding boring AN-1. No borings or soil sampling was conducted east of boring AN-1, therefore the extent of contamination was assumed to be the same on both sides of the boring. For the purpose of estimating the volume of contaminated soil in the area of boring AN-1, Earth Tech has assumed (from the field screening data in Table 1) an average contaminated soil thickness of 8 feet with a geometry as shown on Figure 3. Based on a contamination thickness of 8 feet with a width of 35 feet and a length of 35 feet, a volume of approximately 365 cubic yards of contaminated soil is estimated on the right-of-way in this area.

The analytical results of the soil sample from boring AN-5 indicate a diesel fuel concentration of 18 mg/kg. The soil samples from borings AN-2, AN-4, AN-6, and AN-7 contained no detectable TPH concentrations, thus indicating that the contamination is likely confined to the area surrounding boring AN-5. For the purpose of estimating the volume of contaminated soil in the area of boring AN-5, Earth Tech has assumed (from

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the field screening data in Table 1) an average contaminated soil thickness of 2 feet with a geometry as shown on Figure 3. Based on a contamination thickness of 2 feet with a width of 20 feet and a length of 20 feet, a volume of approximately 30 cubic yards of contaminated soil is estimated on the right-of-way in this area.

The volumes estimated above were calculated from TPH analytical data, which is no longer valid for remediation of sites reported after January 2, 1998. After this date, MADEP EPH/VPH and EPA Method 8260/8270 analyses will likely be required to confirm cleanup. However, these analyses do not correlate exactly with TPH data and, as a result, the actual volume of contaminated soil may be significantly higher or lower. Earth Tech recommends that a copy of this report be submitted to the Division of Waste Management, UST Section, in the Raleigh Regional Office. If you have any questions, please contact me at (919)854-6238.

Sincerely,



Michael W. Branson, P.G.  
Project Manager



Attachments

c: Project File

TABLE 1

**FIELD SCREENING AND ANALYTICAL RESULTS  
ANDREWS PROPERTY (PARCEL #005)  
DURHAM, DURHAM COUNTY, NORTH CAROLINA  
NCDOT PROJECT NO. 8.1352402 (U-4010)  
EARTH TECH PROJECT NO. 71465**

LOCATION	DEPTH (ft)	FID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED TPH ACTION LEVEL (mg/kg)
AN-1	0 - 2	>10.45%	AN-1		
	2 - 4	>10.45%		<b>3550 (160)</b> <b>5030 (3600)</b>	10 10
	4 - 6	>10.45%			
	6 - 8	2354			
AN-2	0 - 2	7.2	AN-2		
	2 - 4	9.3		3550 (BQL) 5030 (1.7)	10 10
AN-3	0 - 2	1.1	AN-3		
	2 - 4	1.2			
	4 - 6	2.4			
	6 - 8	8.9		3550 (BQL) 5030 (BQL)	10 10
AN-4	0 - 2	3.5	AN-4		
	2 - 4	9.9		3550 (BQL) 5030 (BQL)	10 10
	4 - 6	3.1			
AN-5	0 - 2	1.7	AN-5		
	2 - 4	3.3		<b>3550 (18)</b> 5030 (BQL)	10 10
AN-6	0 - 2	5.7	AN-6	3550 (BQL) 5030 (BQL)	10 10
	2 - 4	2.7			
	4 - 6	0.6			
	6 - 8	0.9			
AN-7	0 - 2	0.9	AN-7		
	2 - 4	1.7		3550 (BQL) 5030 (BQL)	10 10
	4 - 6	0.2			
	6 - 8	0.9			

3550 - High boiling point TPH fraction (diesel fuel/fuel oil).

5030 - Low boiling point TPH fraction (gasoline).

BQL - Below quantitation limit.

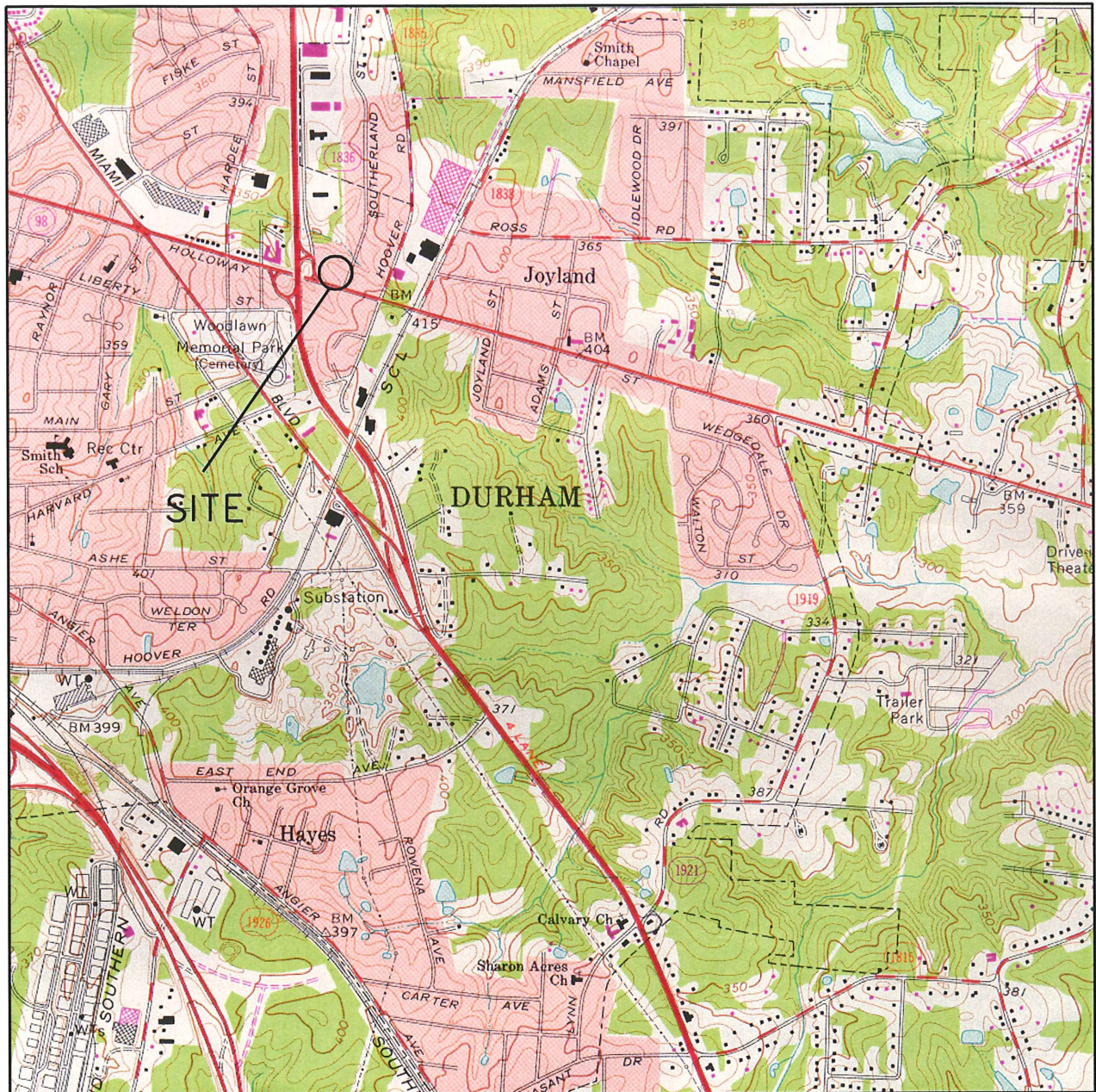
ppm - parts per million.

mg/kg - milligrams per kilogram.

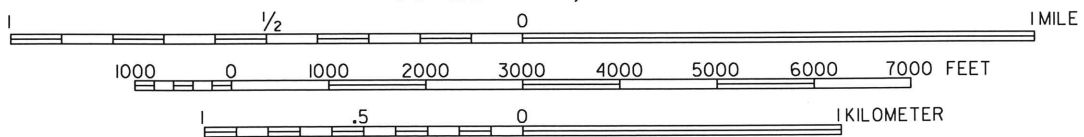
**BOLD** area indicates that concentration is above the assumed action level.

## FIGURES





SCALE 1:24,000



SOURCE: U.S. GEOLOGICAL SURVEY 7.5 MIN QUADRANGLE: SOUTHEAST DURHAM, NC (1981)

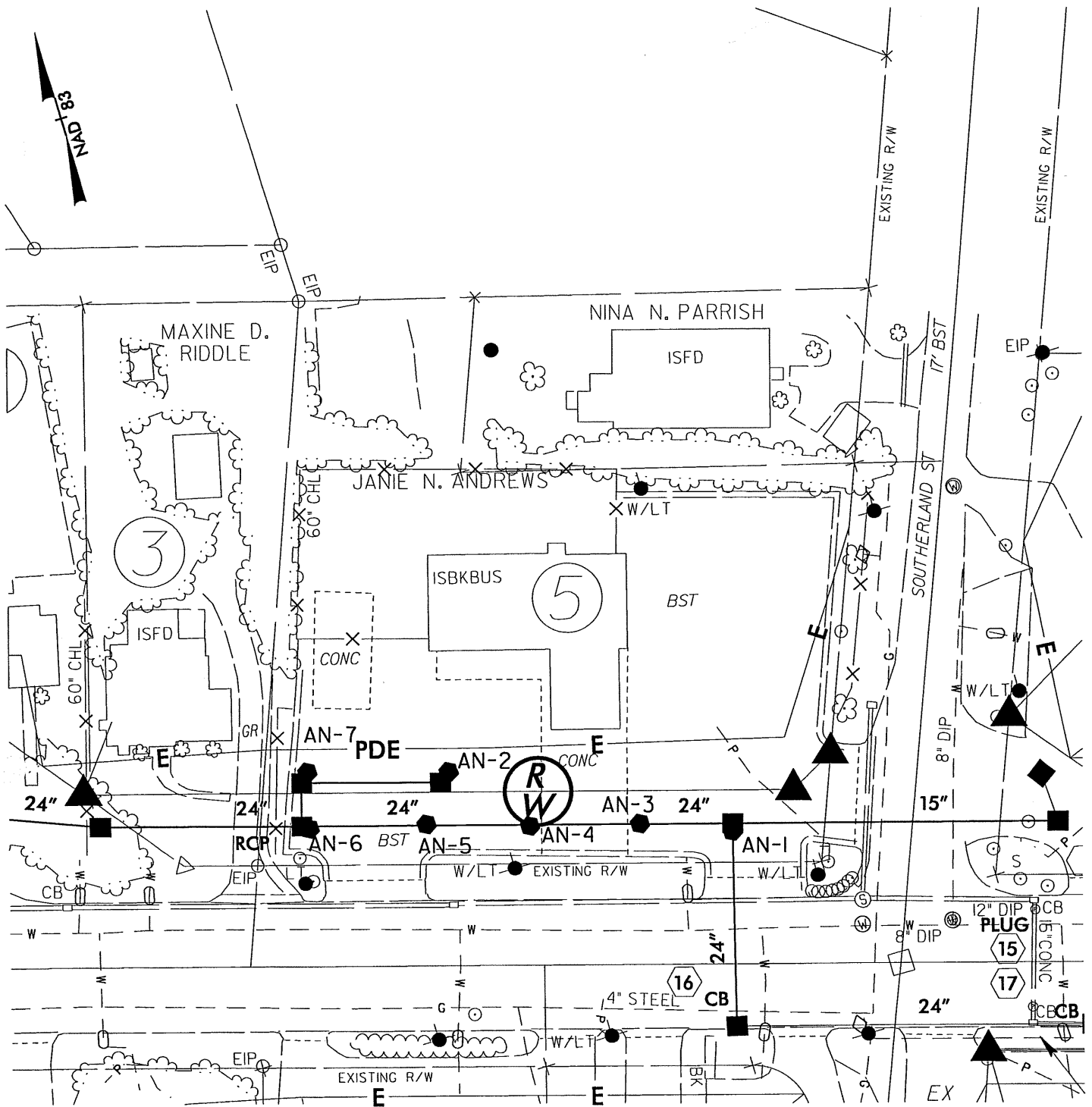


## FIGURE 1 LOCATION MAP

ANDREWS PROPERTY (PARCEL #005)  
DURHAM, DURHAM COUNTY, NORTH CAROLINA

DECEMBER 2003

71465



# **LEGEND**

AN-1

● SOIL SAMPLE LOCATION AND IDENTIFICATION

0 25 50  
GRAPHIC SCALE (FEET)



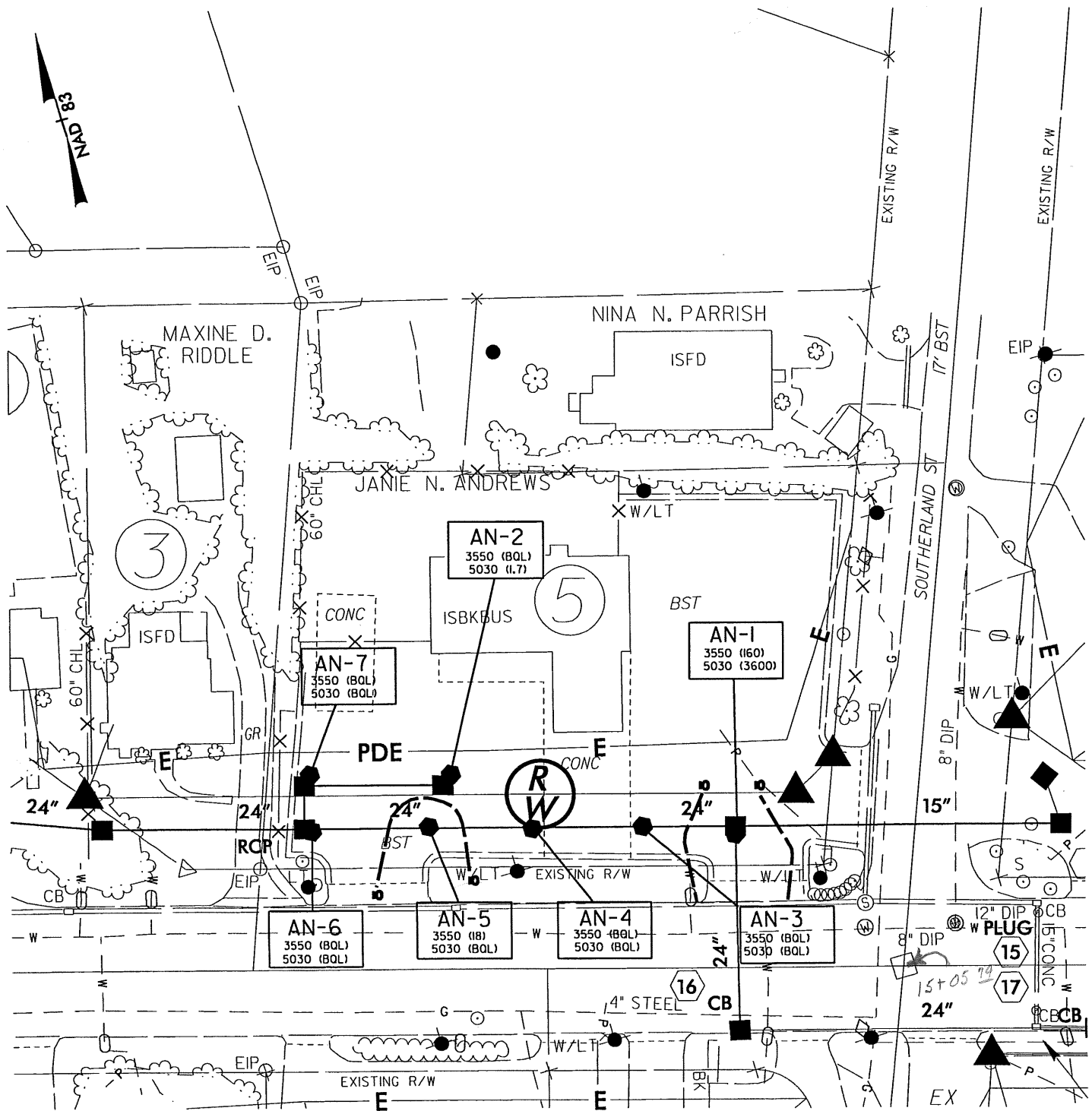
**FIGURE 2  
SITE MAP**

ANDREWS PROPERTY (PARCEL #005)  
DURHAM, DURHAM COUNTY, NORTH CAROLINA

DECEMBER 2003

71465





#### LEGEND

- SOIL SAMPLE LOCATION
- 3550 (123) TPH AS DIESEL FUEL IN MG/KG
- 5030 (123) TPH AS GASOLINE IN MG/KG
- BOL BELOW QUANTITATION LIMIT
- TPH ISOCONCENTRATION CONTOUR

0 25 50  
GRAPHIC SCALE (FEET)



**FIGURE 3**  
ANALYTICAL RESULTS MAP  
ANDREWS PROPERTY (PARCEL #005)  
DURHAM, DURHAM COUNTY, NORTH CAROLINA

DECEMBER 2003

71465

## **ATTACHMENT A**



# TEST BORING REPORT

PROJECT ANDREWS PROPERTY (PARCEL #005)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER AN-1  
 PAGE 1  
 GPS LOCATION N35°59'27.604" W78°51'40.316"  
 DATE 10/23/03  
 DRILLE OPPER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			>10.5%		4" ASPHALT/GRAVEL, MOTTLED MEDIUM BROWN, WHITE, AND TAN SILTY SAND, DRY, STRONG ODOR.
			>10.5%		AS ABOVE, DRY, STRONG ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			>10.5%		AS ABOVE, DRY, STRONG ODOR.
5.0			2354		AS ABOVE, DRY, STRONG ODOR.
					BORING TERMINATED AT 8 FEET.
10.0					
15.0					
20.0					

# TEST BORING REPORT

PROJECT ANDREWS PROPERTY (PARCEL #005)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER AN-2  
 PAGE \_\_\_\_\_  
 GPS LOCATION N35°59'28.003" W78°51'41.419"  
 DATE 10/23/03  
 DRILLE OPPER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			7.2		4" ASPHALT/GRAVEL, MEDIUM TO LIGHT CHOCOLATE BROWN CLAYEY SILT TO SILTY CLAY, DRY, NO ODOR.
			9.3		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0					
15.0					
20.0					

# TEST BORING REPORT

PROJECT ANDREWS PROPERTY (PARCEL #005)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER AN-3  
 PAGE 1  
 GPS LOCATION N35°59'42.201" W78°51'40.758"  
 DATE 10/23/03  
 DRILLE OPPER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			1.1		4" ASPHALT/GRAVEL, MEDIUM TO LIGHT CHOCOLATE BROWN CLAYEY SILT TO SILTY CLAY, DRY, NO ODOR.
			1.2		AS ABOVE, DRY, NO ODOR.
			2.4		AS ABOVE WITH CLAY INCREASING, DRY, NO ODOR.
			8.9		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0					BORING TERMINATED AT 8 FEET.
15.0					
20.0					

# TEST BORING REPORT

PROJECT ANDREWS PROPERTY (PARCEL #005)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER AN-4  
 PAGE 1  
 GPS LOCATION N35°59'27.802" W78°51'41.075"  
 DATE 10/23/03  
 DRILLE OPPER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			3.5		4" ASPHALT/GRAVEL, MOTTLED BROWN, TAN, AND WHITE SILTY CLAY, DRY, NO ODOR.
			9.9		MEDIUM TO LIGHT CHOCOLATE BROWN CLAYEY SILT, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			3.1		AS ABOVE, DRY, NO ODOR.
10.0					EQUIPMENT REFUSAL AT 6.5 FEET.
15.0					
20.0					



# TEST BORING REPORT

PROJECT ANDREWS PROPERTY (PARCEL #005)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER AN-5  
 PAGE 1  
 GPS LOCATION N35°59'27.867" W78°51'41.495"  
 DATE 10/23/03  
 DRILLE OPPER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			1.7		4" ASPHALT/GRAVEL, MEDIUM TO LIGHT CHOCOLATE BROWN CLAYEY SILT, DRY, NO ODOR.
			3.3		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
					EQUIPMENT REFUSAL AT 4 FEET.
10.0					
15.0					
20.0					

# TEST BORING REPORT

PROJECT ANDREWS PROPERTY (PARCEL #005)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER AN-6  
 PAGE 1  
 GPS LOCATION N35°59'28.015" W78°51'42.060"  
 DATE 10/23/03  
 DRILLE OPPER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			5.7		4" ASPHALT/GRAVEL, MOTTLED BROWN, TAN, AND WHITE SILTY CLAY TO CLAYEY SILT, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			2.7		AS ABOVE, DRY, NO ODOR.
			0.6		AS ABOVE, DRY, NO ODOR.
10.0			0.9		AS ABOVE, DRY, NO ODOR.
15.0					
20.0					

# TEST BORING REPORT

PROJECT ANDREWS PROPERTY (PARCEL #005)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER AN-7  
 PAGE 1  
 GPS LOCATION N35°59'28.153" W78°51'41.993"  
 DATE 10/23/03  
 DRILLE OPPER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			0.9		4" ASPHALT/GRAVEL, MOTTLED BROWN, TAN, AND WHITE SILTY CLAY TO CLAYEY SILT, DRY, NO ODOR.
			1.7		MEDIUM TO LIGHT CHOCOLATE BROWN CLAYEY SILT, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			0.2		AS ABOVE, DRY, NO ODOR.
10.0			0.9		AS ABOVE, DRY, NO ODOR.
15.0					
20.0					

## **ATTACHMENT B**





ANDREWS PROPERTY (PARCEL #005)



ANDREWS PROPERTY (PARCEL #005)





ANDREWS PROPERTY (PARCEL #005)



ANDREWS PROPERTY (PARCEL #005)





ANDREWS PROPERTY (PARCEL #005)



ANDREWS PROPERTY (PARCEL #005)





ANDREWS PROPERTY (PARCEL #005)

## **ATTACHMENT C**

# Lab Report



## Case Narrative

Date: 11/6/03

Company: Earth Tech Remediation Services  
Contact: Michael Branson  
Address: 701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Client Project ID: Durham-Andrews  
Prism Log-In Group No: 3246L8

The attached Laboratory Report contains the analytical results for the project identified above and includes Quality Control Data and a Chain-of-Custody copy.

Data qualifiers are flagged individually on each sample. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Please call if you have any questions relating to this analytical report.

Data Reviewed by: Paula Cilleland  
Signature: Paula A. Cilleland  
Review Date: 11-6-03

Project Manager: Angela Overcash  
Signature: [Signature]  
Approval Date: 11/7/03

Note: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc.

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# Lab Report



11/6/03

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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: **Durham-Andrews**  
Customer Sample ID: **AN-1**  
Prism Sample ID: **AC97941** Matrix: soil  
Login Group: 3246L8  
Sample Collection Date/Time: 10/23/03 09:15  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	3600	mg/kg	200	8015B/5030	10/31/03 18:11	EHT
SURR: GRO	103	%	34-128	8015B/5030	10/31/03 18:11	EHT
DILUTION FACTOR	1000	mg/kg		8015B/5030	10/31/03 18:11	EHT
-----						
CALCULATIONS BASED ON DRY WT.	89	% DRY WT.	0.01	SM 2540 G	10/29/03 09:35	JDP
PREP. METHOD 3545 FOR DIESEL	25.03g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	160	mg/kg	50	SW846-8015B	11/3/03 13:00	JMV
SURR: o-TERPHENYL	87	%	20-151	SW846-8015B	11/3/03 13:00	JMV
DILUTION FACTOR	5	mg/kg		SW846-8015B	11/3/03 13:00	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# Lab Report



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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Andrews  
**Customer Sample ID:** AN-2  
**Prism Sample ID:** AC97942    Matrix: soil  
Login Group: 3246L8  
Sample Collection Date/Time: 10/23/03    09:30  
Lab Submittal Date/Time: 10/27/03    14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	1.7	mg/kg	1.0	8015B/5030	10/29/03 23:27	EHT
SURR: GRO	80	%	34-128	8015B/5030	10/29/03 23:27	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/29/03 23:27	EHT
-----						
CALCULATIONS BASED ON DRY WT.	88	% DRY WT.	0.01	SM 2540 G	10/29/03 09:35	JDP
PREP. METHOD 3545 FOR DIESEL	25.13g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	Less than	mg/kg	10	SW846-8015B	11/3/03 14:29	JMV
SURR: o-TERPHENYL	100	%	20-151	SW846-8015B	11/3/03 14:29	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	11/3/03 14:29	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409



# Lab Report



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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: **Durham-Andrews**  
Customer Sample ID: **AN-3**  
Prism Sample ID: **AC97943** Matrix: soil  
Login Group: 3246L8  
Sample Collection Date/Time: 10/23/03 09:45  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/30/03 00:03	EHT
SURR: GRO	85	%	34-128	8015B/5030	10/30/03 00:03	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/30/03 00:03	EHT
-----						
CALCULATIONS BASED ON DRY WT.	84	% DRY WT.	0.01	SM 2540 G	10/29/03 09:35	JDP
PREP. METHOD 3545 FOR DIESEL	25.20g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	11/1/03 06:41	JMV
SURR: o-TERPHENYL	71	%	20-151	SW846-8015B	11/1/03 06:41	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	11/1/03 06:41	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

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Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# Lab Report



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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Andrews  
**Customer Sample ID:** AN-4  
**Prism Sample ID:** AC97944    Matrix: soil  
Login Group: 3246L8  
Sample Collection Date/Time: 10/23/03    10:00  
Lab Submittal Date/Time: 10/27/03    14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/30/03 00:40	EHT
SURR: GRO	79	%	34-128	8015B/5030	10/30/03 00:40	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/30/03 00:40	EHT
-----						
CALCULATIONS BASED ON DRY WT.	86	% DRY WT.	0.01	SM 2540 G	10/29/03 09:35	JDP
PREP. METHOD 3545 FOR DIESEL	25.29g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	11/1/03 05:57	JMV
SURR: o-TERPHENYL	104	%	20-151	SW846-8015B	11/1/03 05:57	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	11/1/03 05:57	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# Lab Report



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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Andrews  
**Customer Sample ID:** AN-5  
**Prism Sample ID:** AC97945    Matrix: soil  
Login Group: 3246L8  
Sample Collection Date/Time: 10/23/03    10:45  
Lab Submittal Date/Time: 10/27/03    14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/30/03 01:16	EHT
SURR: GRO	82	%	34-128	8015B/5030	10/30/03 01:16	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/30/03 01:16	EHT
-----						
CALCULATIONS BASED ON DRY WT.	87	% DRY WT.	0.01	SM 2540 G	10/29/03 09:35	JDP
PREP. METHOD 3545 FOR DIESEL	25.00g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	18	mg/kg	10	SW846-8015B	11/4/03 15:14	JMV
SURR: o-TERPHENYL	98	%	20-151	SW846-8015B	11/4/03 15:14	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	11/4/03 15:14	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# Lab Report



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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: **Durham-Andrews**  
Customer Sample ID: **AN-6**  
Prism Sample ID: **AC97946** Matrix: soil  
Login Group: 3246L8  
Sample Collection Date/Time: 10/23/03 11:00  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/30/03 01:53	EHT
SURR: GRO	84	%	34-128	8015B/5030	10/30/03 01:53	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/30/03 01:53	EHT
-----						
CALCULATIONS BASED ON DRY WT.	83	% DRY WT.	0.01	SM 2540 G	10/29/03 09:35	JDP
PREP. METHOD 3545 FOR DIESEL	25.08g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	11/1/03 04:27	JMV
SURR: o-TERPHENYL	98	%	20-151	SW846-8015B	11/1/03 04:27	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	11/1/03 04:27	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# Lab Report



11/6/03

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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: **Durham-Andrews**  
Customer Sample ID: **AN-7**  
Prism Sample ID: **AC97947** Matrix: soil  
Login Group: 3246L8  
Sample Collection Date/Time: 10/23/03 11:20  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/30/03 03:06	EHT
SURR: GRO	75	%	34-128	8015B/5030	10/30/03 03:06	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/30/03 03:06	EHT
-----						
CALCULATIONS BASED ON DRY WT.	87	% DRY WT.	0.01	SM 2540 G	10/29/03 09:35	JDP
PREP. METHOD 3545 FOR DIESEL	25.02g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	Less than	mg/kg	10	SW846-8015B	11/3/03 13:44	JMV
SURR: o-TERPHENYL	100	%	20-151	SW846-8015B	11/3/03 13:44	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	11/3/03 13:44	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# Lab Report



11/6/03

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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: Durham-Andrews  
Customer Sample ID: QC  
Prism Sample ID: AC97948 Matrix: n/a  
Login Group: 3246L8  
Sample Collection Date/Time: 10/23/03  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
-------------------	----------------	-------	--------------------	---------------------	----------------------	---------

## DRO QC REPORT

xDRO-8015/MOD 10/28/03 11:35 JMV

QC DATA FOR DRO / 3550  
Batch ID: SDRO-102803  
Spiked Sample: AC97637

	True Value mg/kg	Observed mg/kg	% Recovery	Acceptance Range
Method Blank	N/A	< 10	N/A	< 10
Blank Spike	80.0	87.4	109	54-143%
Matrix Spike	80.0	75.0	94	44-147%
MS Duplicate	80.0	76.0	95	44-147%
RPD			1	< 36%

## GRO QC REPORT

xGRO/8015MOD 10/28/03 18:50 EHT

QC DATA FOR 8015 / GRO SOILS  
Batch ID: VGCE-102903  
Spiked sample: AC97935

	True Value mg/kg	Observed mg/kg	% Recovery	Acceptance Range
Method Blank	N/A	< 1.0	N/A	< 1.0
LCS	2.0	1.61	81	64-124%
Matrix Spike	2.0	1.62	81	37-126%
MS Duplicate	2.0	1.55	78	37-126%
RPD			4	< 34

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# Lab Report



11/6/03

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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Andrews  
**Customer Sample ID:** QC  
**Prism Sample ID:** AC97948      Matrix: n/a  
Login Group: 3246L8  
**Sample Collection Date/Time:** 10/23/03  
**Lab Submittal Date/Time:** 10/27/03      14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
-------------------	----------------	-------	--------------------	---------------------	----------------------	---------

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# PRISM

LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543

Client Company Name: East Tect

Report To/Contact Name: Mike Brown

Reporting Address: 701 Corporate Center Dr

5.4 695 10101 101 77607

Phone: 9194412342 Fax (Yes) (No): 9194416259

Site Location Name: Highway 57

Site Location Physical Address: Highway 57

## CHAIN OF CUSTODY RECORD

PAGE 1 OF 1 QUOTE # TO ENSURE PROPER BILLING: 81352402 (U-400)

Project Name: Delaware Highway

Short Hold Analysis: (Yes) (No) Yes UST Project: (Yes) (No) Yes

\*Please ATTACH any project specific reporting provisions and/or QC Requirements

Invoice To: East Tect

Address: 701 Corporate Center Dr

Purchase Order No./Billing Reference 405-350111

Requested Due Date ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days ☐ 5 Days

☐ 6-9 Days ☒ Standard 10 days

Samples received after 15:00 will be processed next business day. Turnaround time is based on business days, excluding weekends and holidays.

(SEE REVERSE SIDE FOR RUSH TURNAROUND FEES)

### LAB USE ONLY

YES NO N/A

Samples INTACT upon arrival? 2.3

Received ON WET ICE? Temp 2.3

PROPER PRESERVATIVES indicated?

Received WITHIN HOLDING TIMES?

CUSTODY SEALS INTACT?

VOLATILES rec'd w/OUT HEADSPACE?

PROPER CONTAINERS used?

### TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NELAC USAC FL NC

Water Chlorinated: YES NO

Sample Iced Upon Collection: YES NO

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER			PRESERVA- TIVES	ANALYSES REQUESTED		REMARKS	SUB LAB CERT. ID NO.	PRISM LAB ID NO.
				*TYPE SEE BELOW	NO.	SIZE						
AL-1	10/23/03	0915	Soil	CG	2	8/4oz	✓	✓	✓			12441
AL-2	10/23/03	0930	Soil	CG	2	8/4oz	✓	✓	✓			12442
AL-3	10/23/03	0945	Soil	CG	2	8/4oz	✓	✓	✓			12443
AL-4	10/23/03	1000	Soil	CG	2	8/4oz	✓	✓	✓			12444
AL-5	10/23/03	1045	Soil	CG	2	8/4oz	✓	✓	✓			12445
AL-6	10/23/03	1100	Soil	CG	2	8/4oz	✓	✓	✓			12446
AL-7	10/23/03	1120	Soil	CG	2	8/4oz	✓	✓	✓			12447
												12448

PRESS DOWN FIRMLY - 3 COPIES

Sampler's Signature M. Brown Sampled By (Print Name) M. Brown Affiliation East Tect

Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By: (Signature) M. Brown Received By: (Signature) Mike Brown Date 10/23/03 Military/Hours 10:55

Relinquished By: (Signature) M. Brown Received By: (Signature) Mike Brown Date 10/23/03 Military/Hours 11:30

Relinquished By: (Signature) M. Brown Received By: (Signature) Mike Brown Date 10/23/03 Military/Hours 11:45

Method of Shipment: UPS NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.

Field Ex ☐ UPS ☐ Hand-delivered ☒ Prism Field Service ☐ Other ☐

NPDES: ☐ US ☐ GROUNDWATER: ☐ DRINKING WATER: ☐ SOLID WASTE: ☐ RCRA: ☐ CERCLA: ☐ LANDFILL: ☐ OTHER: ☐

\*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic: TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)

### PRISM USE ONLY

Site Arrival Time:

Site Departure Time:

Field Tech Fee:

Mileage:

SEE REVERSE FOR  
TERMS & CONDITIONS

FINAL REPORT COPY



December 18, 2003

701 Corporate Center Drive, Suite 475, Raleigh, North Carolina 27607

Mr. Greg Smith  
North Carolina Department of Transportation  
Geotechnical Engineering Unit  
1589 Mail Service Center  
Raleigh, North Carolina 27699-1589

Reference: Preliminary Site Assessment  
Taylor Family Property (Parcel #007)  
2301 Holloway Street  
Durham, Durham County, North Carolina  
NCDOT Project 8.1352402 (U-4010)  
WBS Element 35011.1.1  
Earth Tech Project No. 71465

Dear Mr. Smith:

Earth Tech of North Carolina, Inc., (Earth Tech) has completed the Preliminary Site Assessment conducted at the above-referenced property. The work was performed in accordance with the Technical and Cost proposal dated October 8, 2003, and the North Carolina Department of Transportation's (NCDOT's) Notice to Proceed dated October 13, 2003. Activities associated with the assessment consisted of collecting soil samples for laboratory analysis. The purpose of this report is to document the field activities, present the laboratory analyses, and provide recommendations regarding the property.

Telephone

919.854.6200

Facsimile

919.854.6259

### Location and Description

The Taylor Family Property (Parcel #007) is located at 2301 Holloway Street (NC98) in Durham, Durham County, North Carolina (Figure 1). This location is in the northwest quadrant of the intersection of Holloway Street and Southerland Street. Based on information supplied by the NCDOT and the site visit, Earth Tech understands that the site is an active convenience store/gas station where five 12,000-gallon underground storage tanks (USTs) are in use. Four of the tanks reportedly contain gasoline and one reportedly contains diesel fuel. The proposed right-of-way does not affect the building or the USTs, but it encompasses most of the front and sides of the pump island area.

Earth Tech reviewed the North Carolina Department of Environment and Natural Resources (NCDENR) Incident Management database and Incident Number 17572 was listed for this location. According to the Incident Management Database, contamination occurred when over 5,000 gallons of gasoline were released during a tank upgrade in 1991. Because of the presence of USTs and the incident number, a Preliminary Site Assessment was requested to evaluate the soils within the right-of-way.



According to the on-site UST Permit, the USTs on the property are operated under Facility Number 0-016343. The operator and owner of the tanks are listed as follows:

Owner

The Pantry, Inc.  
PO Box 1410/1801 Douglas Drive  
Sanford, North Carolina 27330-1410  
(282) 774-6700

Operator

Pantry 3162 (Etna 281)  
2301 Holloway Street  
Durham, North Carolina 27703  
(919) 774-6700

**Site Assessment Activities**

On October 22, 2003, Earth Tech mobilized to the site to conduct a Geoprobe® direct push investigation to evaluate soil conditions within the proposed right-of-way. Continuous sampling using direct push technology (Regional Probing of Raleigh, North Carolina) resulted in generally good recovery of soil samples from the direct-push holes. Soil samples were collected and contained in 4-foot long acetate sleeves inside the direct push sampler. Each of these sleeves was divided in half for soil sample screening. Each 2-foot interval was placed in a resealable plastic bag and the bag was set aside for a sufficient amount of time to allow volatilization of organic compounds from the soil to the bag headspace. The probe of a flame ionization detector/photo ionization detector (FID/PID) was inserted into the bag and the reading was recorded. After terminating the sample hole, the soil sample from the depth interval with the highest FID/PID reading was submitted to Prism Laboratories, Inc., in Charlotte, North Carolina, using standard chain-of-custody procedures. The laboratory analyzed the soil samples for total petroleum hydrocarbons (TPH) using extraction methods 3550 (diesel fuel/fuel oil) and 5030 (gasoline).

Six direct-push holes (ET-1 through ET-6) were advanced within the right-of-way at the site to a depth of 8 feet (Figure 2 and Attachment A). These borings were placed to evaluate soil conditions in areas of a cut section and proposed drop inlet locations. Borings ET-1 through ET-4 were located in the pump island area in the proposed cut section. Borings ET-5 and ET-6 were located at proposed drop inlet locations (Attachment B). The lithology encountered by the direct-push samples generally was consistent throughout the site. The ground surface was covered with about 4 inches of asphalt and gravel. Below the surface treatment was a medium brown to mottled brown, tan, and white silty sand to sandy silt to a depth of about 4 to 7 feet. Underlying this silt/sand was a medium to chocolate brown silty clay. No groundwater was observed in any of the borings. Based on field screening, soil samples from a variety of depths were submitted for laboratory analysis, which are summarized in Table 1. Because no groundwater was encountered, no groundwater sample was collected for analysis.

## Analytical Results

Based on the laboratory reports, summarized in Table 1 and presented in Attachment C, no petroleum hydrocarbon compounds were detected in any of the six soil samples collected from the site (Figure 3).

## Conclusions and Recommendations

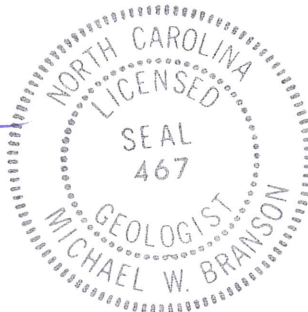
A Preliminary Site Assessment was conducted to evaluate the Taylor Family Property (Parcel #007) at 2301 Holloway Street in Durham, Durham County, North Carolina. A total of six soil borings were advanced to evaluate the soil conditions on the proposed right-of-way in areas of a cut section and proposed drop inlet locations. The laboratory reports for the six soil samples from these borings indicated that no petroleum hydrocarbons were present above the detection limits. No groundwater sample was collected for analysis to evaluate the groundwater conditions.

Earth Tech appreciates the opportunity to work with the NCDOT on this project. Because no hydrocarbon concentrations were detected, no report must be made to the North Carolina Department of Environment and Natural Resources. If you have any questions, please contact me at (919)854-6238.

Sincerely,



Michael W. Branson, P.G.  
Project Manager



Attachments

c: Project File

TABLE 1

**FIELD SCREENING AND ANALYTICAL RESULTS  
TAYLOR FAMILY PROPERTY (PARCEL #007)  
DURHAM, DURHAM COUNTY, NORTH CAROLINA  
NCDOT PROJECT NO. 8.1352402 (U-4010)  
EARTH TECH PROJECT NO. 71465**

LOCATION	DEPTH (ft)	FID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED TPH ACTION LEVEL (mg/kg)
ET-1	0 - 2	1.48			
	2 - 4	1.92			
	4 - 6	2.3	ET-1	3550 (BQL) 5030 (BQL)	10 10
	6 - 8	2.1			
ET-2	0 - 2	0.82			
	2 - 4	1.07			
	4 - 6	2.14			
	6 - 8	11	ET-2	3550 (BQL) 5030 (BQL)	10 10
ET-3	0 - 2	1.13			
	2 - 4	1.01			
	4 - 6	0.95			
	6 - 8	1.29	ET-3	3550 (BQL) 5030 (BQL)	10 10
ET-4	0 - 2	1.23			
	2 - 4	1.78	ET-4	3550 (BQL) 5030 (BQL)	10 10
	4 - 6	1.52			
	6 - 8	1.28			
ET-5	0 - 2	14.2			
	2 - 4	55	ET-5	3550 (BQL) 5030 (BQL)	10 10
	4 - 6	25			
	6 - 8	24			
ET-6	0 - 2	48			
	2 - 4	214	ET-6	3550 (BQL) 5030 (BQL)	10 10
	4 - 6	180			
	6 - 8	40			

3550 - High boiling point TPH fraction (diesel fuel/fuel oil).

5030 - Low boiling point TPH fraction (gasoline).

BQL - Below quantitation limit.

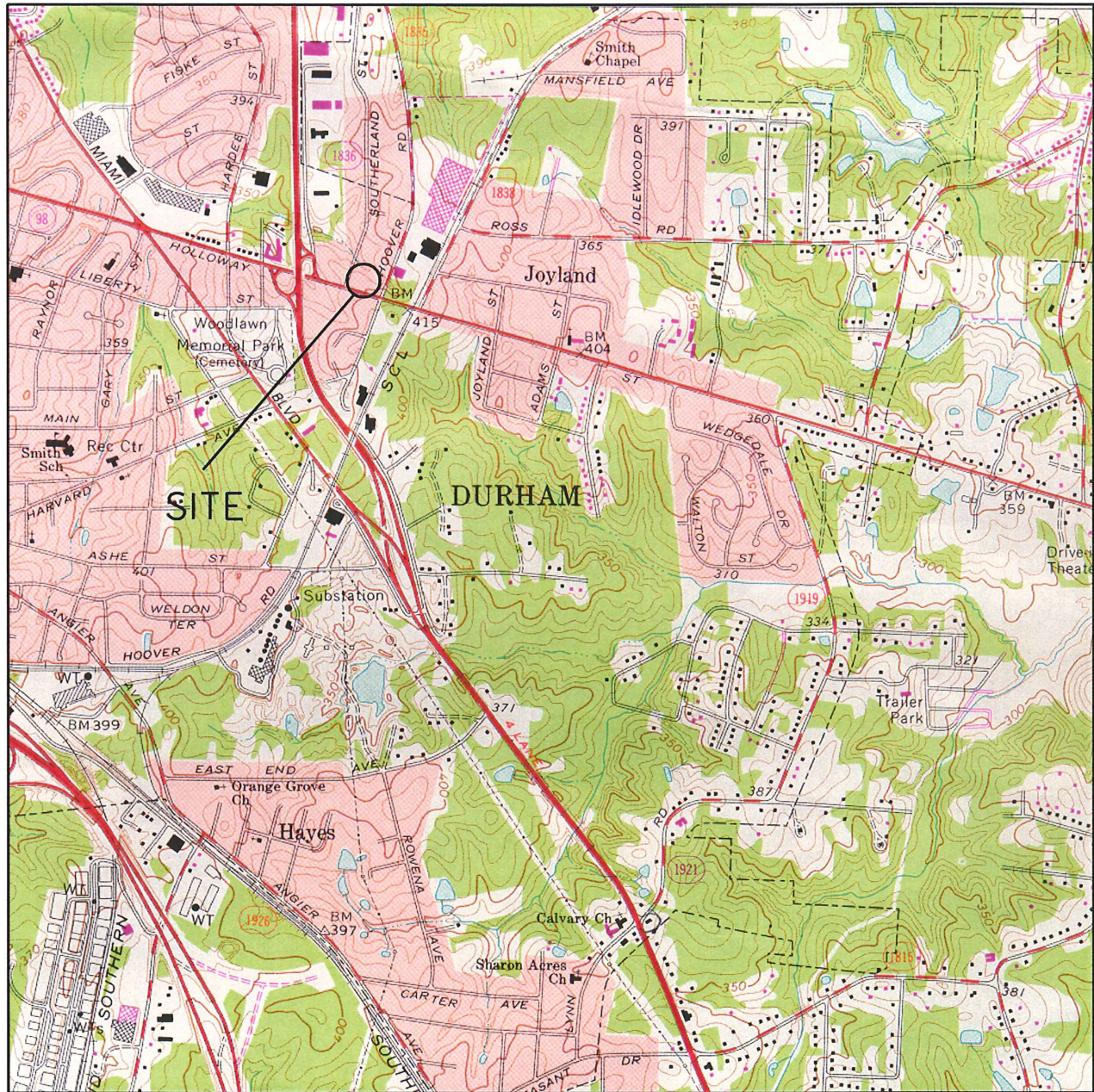
ppm - parts per million.

mg/kg - milligrams per kilogram.

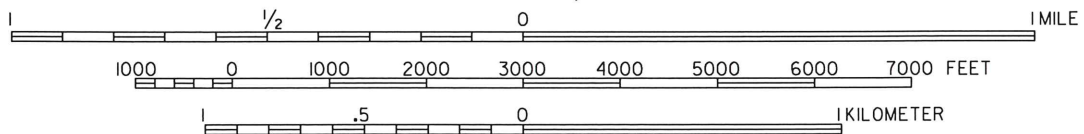
**BOLD** area indicates that concentration is above the assumed action level.

## FIGURES





SCALE 1:24,000



SOURCE: U.S. GEOLOGICAL SURVEY 7.5 MIN QUADRANGLE: SOUTHEAST DURHAM, NC (1981)

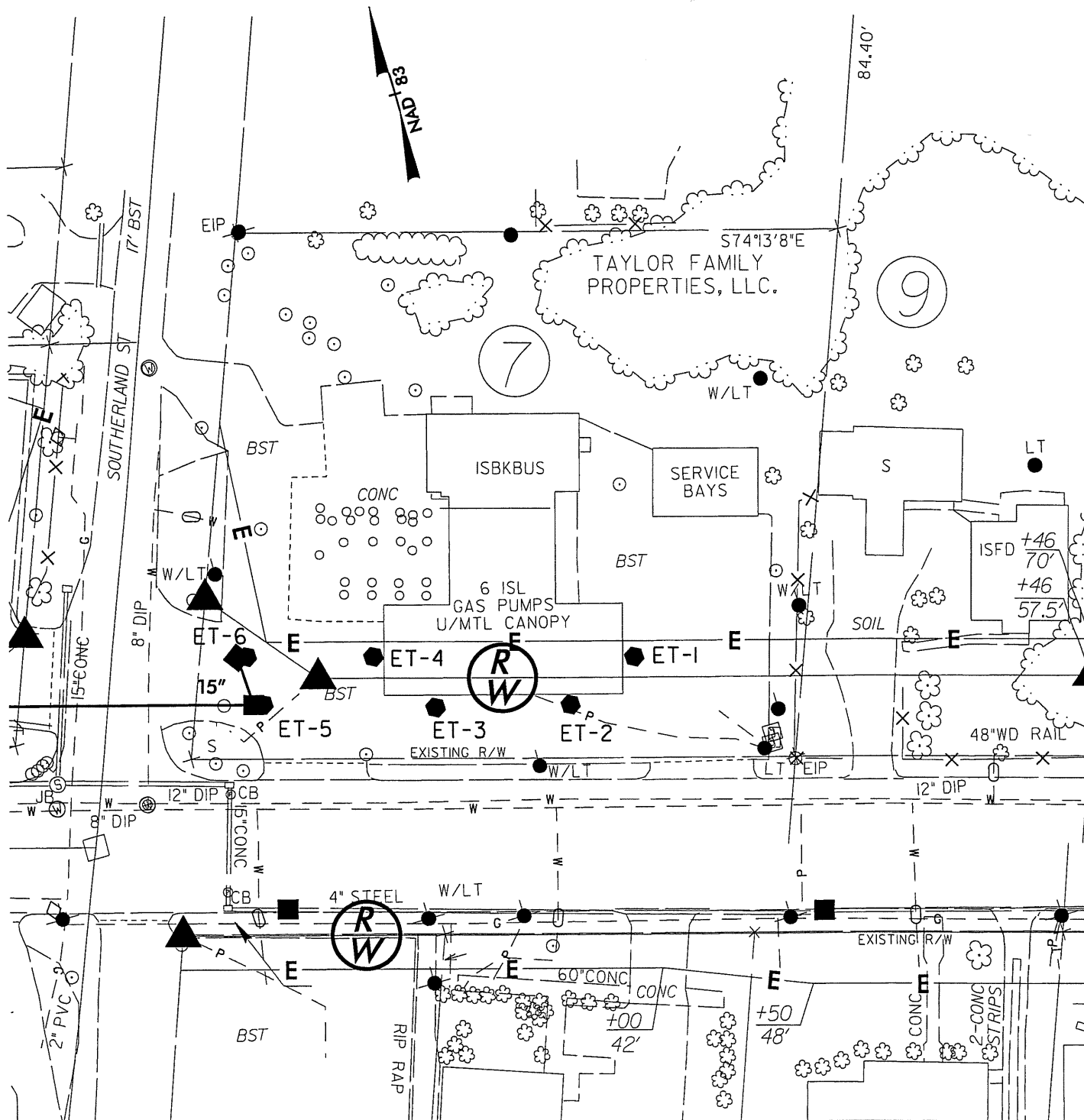


## FIGURE I LOCATION MAP

TAYLOR FAMILY PROPERTY (PARCEL #007)  
DURHAM, DURHAM COUNTY, NORTH CAROLINA

DECEMBER 2003

71465

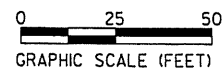


LEGEND

ET-1



SOIL SAMPLE LOCATION AND IDENTIFICATION



E A R T H T E C H



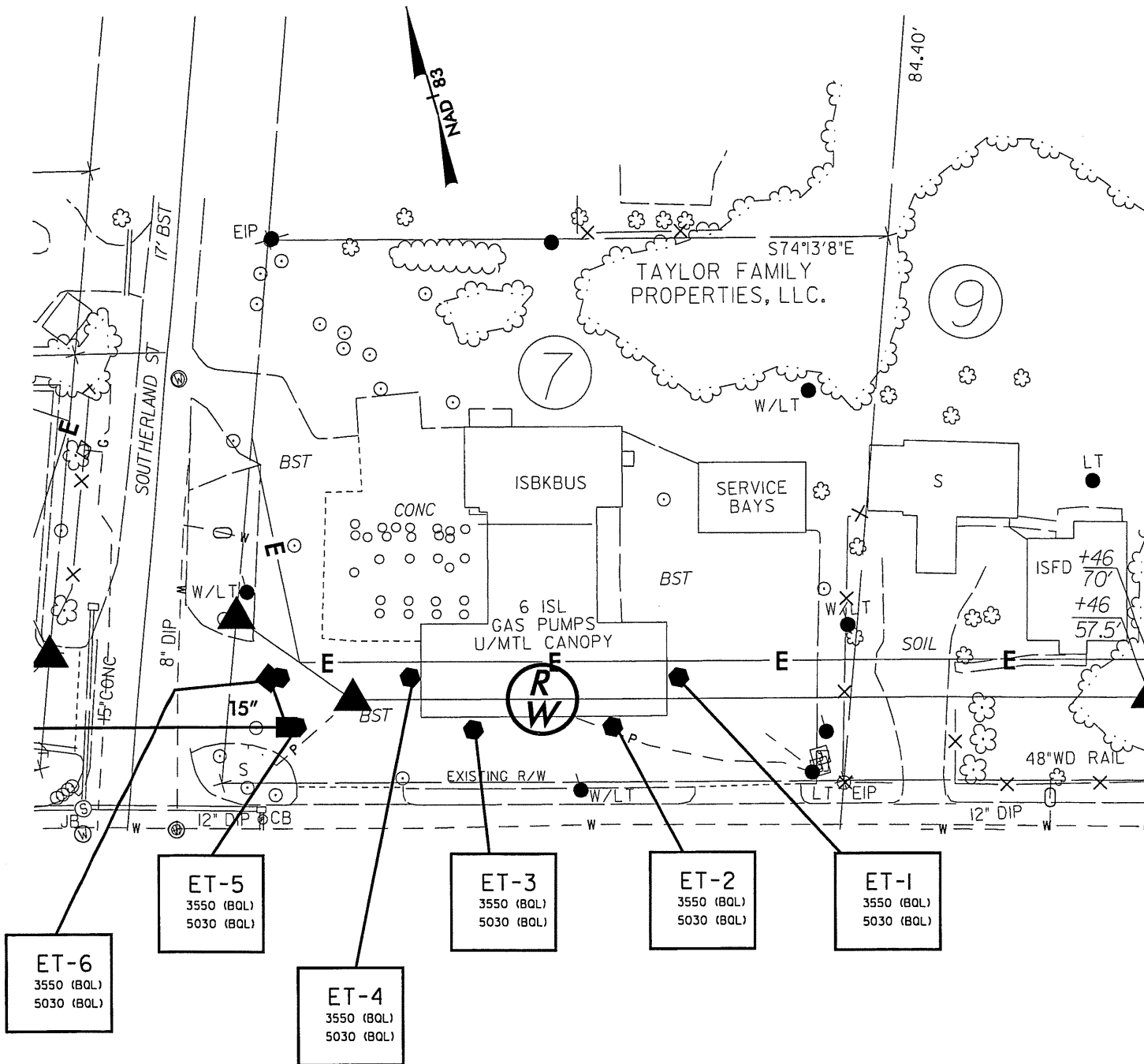
## FIGURE 2 SITE MAP

TAYLOR FAMILY PROPERTY (PARCEL #007)  
DURHAM, DURHAM COUNTY, NORTH CAROLINA

DECEMBER 2003

71465





#### LEGEND

- SOIL SAMPLE LOCATION
- 3550 (123) TPH AS DIESEL FUEL IN MG/KG
- 5030 (123) TPH AS GASOLINE IN MG/KG
- BQL BELOW QUANTITATION LIMIT

0 25 50  
GRAPHIC SCALE (FEET)

E A R T H T E C H



**FIGURE 3**  
**ANALYTICAL RESULTS MAP**  
TAYLOR FAMILY PROPERTY (PARCEL #007)  
DURHAM, DURHAM COUNTY, NORTH CAROLINA

DECEMBER 2003

71465

## **ATTACHMENT A**

# TEST BORING REPORT

<b>PROJECT</b> TAYLOR FAMILY PROPERTY (PARCEL #007)	<b>BORING NUMBER</b> ET-1
<b>CLIENT</b> NCDOT 8.1352402 (U-4010)	<b>PAGE</b> 1
<b>PROJECT NUMBER</b> 71465	<b>GPS LOCATION</b> N35°59'27.020" W78°51'37.488"
<b>CONTRACTOR</b> REGIONAL PROBING	<b>DATE</b> 10/22/03
<b>EQUIPMENT</b> GEOPROBE	<b>DRILLE</b> OPFER
	<b>PREPARED BY</b> BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			1.48		3" ASPHALT/GRAVEL, MEDIUM BROWN SILTY SAND/SANDY SILT, DRY, NO ODOR.
			1.92		AS ABOVE, DRY, NO ODOR.
			2.3		MEDIUM TO LIGHT CHOCOLATE BROWN CLAYEY SILT, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0			2.1		AS ABOVE, DRY, NO ODOR.
15.0					
20.0					

# TEST BORING REPORT

PROJECT TAYLOR FAMILY PROPERTY (PARCEL #007)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER ET-2  
 PAGE 1  
 GPS LOCATION N35°59'27.050" W78°51'37.904"  
 DATE 10/22/03  
 DRILLE OPFER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			0.82		4" ASPHALT/GRAVEL, MEDIUM BROWN TO TAN SILT/CLAY, DRY, NO ODOR.
			1.07		AS ABOVE, DRY, NO ODOR.
			2.14		AS ABOVE, DRY, NO ODOR.
10.0			11		MEDIUM TO LIGHT CHOCOLATE BROWN SILT/SAND, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
15.0					
20.0					

# TEST BORING REPORT

PROJECT TAYLOR FAMILY PROPERTY (PARCEL #007)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER ET-3  
 PAGE 1  
 GPS LOCATION N35°59'27.115" W78°51'38.204"  
 DATE 10/22/03  
 DRILLE OPPER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			1.13		4" ASPHALT/GRAVEL, MEDIUM TO LIGHT CHOCOLATE BROWN CLAYEY SILT TO SILTY CLAY WITH SOME SAND, DRY, NO ODOR.
			1.01		AS ABOVE, DRY, NO ODOR.
			0.95		AS ABOVE, DRY, NO ODOR.
5.0			1.29		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
					BORING TERMINATED AT 8 FEET.
10.0					
15.0					
20.0					

# TEST BORING REPORT

**PROJECT** TAYLOR FAMILY PROPERTY (PARCEL #007)  
**CLIENT** NCDOT 8.1352402 (U-4010)  
**PROJECT NUMBER** 71465  
**CONTRACTOR** REGIONAL PROBING  
**EQUIPMENT** GEOPROBE

**BORING NUMBER** ET-4

**PAGE** 1

**GPS LOCATION** N35°59'27.181" W78°51'38.512"

**DATE** 10/22/03

**DRILLE** OPPER

**PREPARED BY** BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			1.23		4" ASPHALT/GRAVEL, MEDIUM TO LIGHT CHOCOLATE BROWN CLAYEY SILT TO SILTY CLAY WITH SOME SAND, DRY, NO ODOR.
			1.78		
			1.52		
10.0			1.28		AS ABOVE, DRY, NO ODOR.
15.0					BORING TERMINATED AT 8 FEET.
20.0					

# TEST BORING REPORT

PROJECT TAYLOR FAMILY PROPERTY (PARCEL #007)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER ET-5  
 PAGE 1  
 GPS LOCATION N35°59'27.243" W78°51'39.007"  
 DATE 10/22/03  
 DRILLE OPPER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			14.20		4" ASPHALT/GRAVEL, MOTTLED BROWN, TAN, AND WHITE SILTY SAND, DRY, SLIGHT ODOR.
			55		AS ABOVE, DRY, MODERATE ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			25		AS ABOVE, DRY, MODERATE ODOR.
10.0			24		AS ABOVE TO 7 FEET, BECOMES MEDIUM TO LIGHT CHOCOLATE BROWN SILT CLAY, DRY, SLIGHT ODOR
15.0					
20.0					



# TEST BORING REPORT

PROJECT TAYLOR FAMILY PROPERTY (PARCEL #007)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER ET-6  
 PAGE 1  
 GPS LOCATION N35°59'27.432" W78°51'38.987"  
 DATE 10/22/03  
 DRILLE OPFER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			48		4" ASPHALT/GRAVEL, MOTTLED BROWN, TAN, AND WHITE SILTY SAND, DRY, NO ODOR.
			214		AS ABOVE, DRY, SLIGHT ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			180		AS ABOVE, DRY, SLIGHT ODOR.
10.0			40		AS ABOVE TO 7 FEET, BECOMES MEDIUM TO LIGHT CHOCOLATE BROWN SILT CLAY, DRY, NO ODOR
15.0					
20.0					

## **ATTACHMENT B**



TAYLOR FAMILY PROPERTY (PARCEL #007)



TAYLOR FAMILY PROPERTY (PARCEL #007) ALONG EASEMENT LINE





TAYLOR FAMILY PROPERTY (PARCEL #007)



TAYLOR FAMILY PROPERTY (PARCEL #007)





TAYLOR FAMILY PROPERTY (PARCEL #007)



TAYLOR FAMILY PROPERTY (PARCEL #007)





TAYLOR FAMILY PROPERTY (PARCEL #007)

## **ATTACHMENT C**

# Lab Report



## Case Narrative

Date: 11/6/03

Company: Earth Tech Remediation Services  
Contact: Michael Branson  
Address: 701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Client Project ID: Durham-Taylor  
Prism Log-In Group No: 3243L7

The attached Laboratory Report contains the analytical results for the project identified above and includes Quality Control Data and a Chain-of-Custody copy.

Data qualifiers are flagged individually on each sample. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Please call if you have any questions relating to this analytical report.

Data Reviewed by: Paula Gilleland  
Signature: Paula A. Gilleland  
Review Date: 11-6-03

Project Manager: Angela Overcast  
Signature: [Signature]  
Approval Date: 11/6/03

Note: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc.

F:\common\casenarrative



# Lab Report



11/6/03

Page 1 of 8

Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Taylor  
**Customer Sample ID:** ET-1  
**Prism Sample ID:** AC97919    Matrix: soil  
**Login Group:** 3243L7  
**Sample Collection Date/Time:** 10/22/03    10:15  
**Lab Submittal Date/Time:** 10/27/03    14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/27/03 22:50	EHT
SURR: GRO	95	%	34-128	8015B/5030	10/27/03 22:50	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/27/03 22:50	EHT
-----						
CALCULATIONS BASED ON DRY WT.	86	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.04g-1mL			SW846-3545	10/27/03 15:45	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	10/28/03 19:20	JMV
SURR: o-TERPHENYL	104	%	20-151	SW846-8015B	10/28/03 19:20	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/28/03 19:20	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# Lab Report



11/6/03

Page 2 of 8

Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Taylor  
**Customer Sample ID:** ET-2  
**Prism Sample ID:** AC97920      Matrix: soil  
**Login Group:** 3243L7  
**Sample Collection Date/Time:** 10/22/03      10:30  
**Lab Submittal Date/Time:** 10/27/03      14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/27/03 23:27	EHT
SURR: GRO	76	%	34-128	8015B/5030	10/27/03 23:27	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/27/03 23:27	EHT
-----						
CALCULATIONS BASED ON DRY WT.	87	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.05g-1mL			SW846-3545	10/27/03 15:45	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	10/29/03 02:07	JMV
SURR: o-TERPHENYL	78	%	20-151	SW846-8015B	10/29/03 02:07	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/29/03 02:07	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

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# Lab Report



11/6/03

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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Taylor  
**Customer Sample ID:** ET-3  
**Prism Sample ID:** AC97921 Matrix: soil  
Login Group: 3243L7  
Sample Collection Date/Time: 10/22/03 10:45  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/28/03 00:03	EHT
SURR: GRO	82	%	34-128	8015B/5030	10/28/03 00:03	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/28/03 00:03	EHT
-----						
CALCULATIONS BASED ON DRY WT.	86	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.02g-1mL			SW846-3545	10/27/03 15:45	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	10/29/03 04:20	JMV
SURR: o-TERPHENYL	77	%	20-151	SW846-8015B	10/29/03 04:20	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/29/03 04:20	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

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# Lab Report



11/6/03

Page 4 of 8

Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Taylor  
**Customer Sample ID:** ET-4  
**Prism Sample ID:** AC97922      Matrix: soil  
**Login Group:** 3243L7  
**Sample Collection Date/Time:** 10/22/03      11:00  
**Lab Submittal Date/Time:** 10/27/03      14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/28/03 00:40	EHT
SURR: GRO	79	%	34-128	8015B/5030	10/28/03 00:40	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/28/03 00:40	EHT
-----						
CALCULATIONS BASED ON DRY WT.	84	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.01g-1mL			SW846-3545	10/27/03 15:45	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	10/29/03 03:36	JMV
SURR: o-TERPHENYL	82	%	20-151	SW846-8015B	10/29/03 03:36	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/29/03 03:36	JMV

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

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Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# Lab Report



11/6/03

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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Taylor  
**Customer Sample ID:** ET-5  
**Prism Sample ID:** AC97923    Matrix: soil  
**Login Group:** 3243L7  
**Sample Collection Date/Time:** 10/22/03    11:10  
**Lab Submittal Date/Time:** 10/27/03    14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/28/03 01:16	EHT
SURR: GRO	93	%	34-128	8015B/5030	10/28/03 01:16	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/28/03 01:16	EHT
-----						
CALCULATIONS BASED ON DRY WT.	89	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.09g-1mL			SW846-3545	10/27/03 15:45	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	10/29/03 02:52	JMV
SURR: o-TERPHENYL	85	%	20-151	SW846-8015B	10/29/03 02:52	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/29/03 02:52	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

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# Lab Report



11/6/03

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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: Durham-Taylor  
Customer Sample ID: ET-6  
Prism Sample ID: AC97924 Matrix: soil  
Login Group: 3243L7  
Sample Collection Date/Time: 10/22/03 11:30  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/30/03 21:47	EHT
SURR: GRO	83	%	34-128	8015B/5030	10/30/03 21:47	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/30/03 21:47	EHT
-----						
CALCULATIONS BASED ON DRY WT.	88	% DRY WT.	0.01	SM 2540 G	10/30/03 10:20	CWC
PREP. METHOD 3545 FOR DIESEL	25.07g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	11/1/03 08:10	JMV
SURR: o-TERPHENYL	75	%	20-151	SW846-8015B	11/1/03 08:10	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	11/1/03 08:10	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

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# Lab Report



11/6/03

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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: Durham-Taylor  
Customer Sample ID: QC  
Prism Sample ID: AC98152 Matrix: n/a  
Login Group: 3243L7  
Sample Collection Date/Time: 10/22/03  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
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## DRO QC REPORT

xDRO-8015/MOD 10/31/03 02:17 JMV

QC DATA FOR DRO / 3550  
Batch ID: SDRO-103003  
Spiked Sample: AC98132

	True Value mg/kg	Observed mg/kg	% Recovery	Acceptance Range
Method Blank	N/A	< 10	N/A	< 10
Blank Spike	80.0	52.3	65	54-143%
Matrix Spike	80.0	56.0	70	44-147%
MS Duplicate	80.0	57.0	72	44-147%
RPD			2	< 36%

## GRO QC REPORT

xGRO/8015MOD 10/25/03 19:08 EHT

QC DATA FOR 8015 / GRO SOILS  
Batch ID: V3400-102703  
Spiked sample: AC97913

	True Value mg/kg	Observed mg/kg	% Recovery	Acceptance Range
Method Blank	N/A	< 1.0	N/A	< 1.0
LCS	2.0	1.76	88	64-124%
Matrix Spike	2.0	1.64	82	37-126%
MS Duplicate	2.0	1.59	80	37-126%
RPD			3	< 34

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

# Lab Report



11/6/03

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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Taylor  
**Customer Sample ID:** QC  
**Prism Sample ID:** AC98152      Matrix: n/a  
**Login Group:** 3243L7  
**Sample Collection Date/Time:** 10/22/03  
**Lab Submittal Date/Time:** 10/27/03      14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
-------------------	----------------	-------	--------------------	---------------------	----------------------	---------

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409





December 18, 2003

701 Corporate Center Drive, Suite 475, Raleigh, North Carolina 27607

Mr. Greg Smith  
North Carolina Department of Transportation  
Geotechnical Engineering Unit  
1589 Mail Service Center  
Raleigh, North Carolina 27699-1589

Reference: Preliminary Site Assessment  
M.M. Fowler, Inc., Property (Parcel #016)  
2406 Holloway Street  
Durham, Durham County, North Carolina  
NCDOT Project 8.1352402 (U-4010)  
WBS Element 35011.1.1  
Earth Tech Project No. 71465

Dear Mr. Smith:

Earth Tech of North Carolina, Inc., (Earth Tech) has completed the Preliminary Site Assessment conducted at the above-referenced property. The work was performed in accordance with the Technical and Cost proposal dated October 8, 2003, and the North Carolina Department of Transportation's (NCDOT's) Notice to Proceed dated October 13, 2003. Activities associated with the assessment consisted of collecting soil samples for laboratory analysis. The purpose of this report is to document the field activities, present the laboratory analyses, and provide recommendations regarding the property.

Telephone

919.854.6200

Facsimile

919.854.6259

### Location and Description

The M.M. Fowler, Inc., Property (Parcel #016) is located at 22406 Holloway Street (NC98) in Durham, Durham County, North Carolina (Figure 1). This location is in the northeast quadrant of the intersection of Holloway Street and Hoover Road. Based on information supplied by the NCDOT and the site visit, Earth Tech understands that the site is an active convenience store/gas station where five underground storage tanks (USTs) are reported to be present. Three 10,000-gallon USTs contain gasoline, one 10,000-gallon UST contains diesel fuel, and one 6,000-gallon UST contains kerosene. The property is currently in use as a restaurant. The proposed right-of-way does not affect the building or the former UST area, but it encompasses the front of the pump island area.

Earth Tech reviewed the North Carolina Department of Environment and Natural Resources (NCDENR) Incident Management database and Incident Number 26164 was listed for this location. According to the Incident Management Database, the incident was assigned when soil sampling indicated a TPH concentration of 180 mg/kg in the soil. According to the database, the incident was closed out in November 2003. Because of the presence of USTs and the incident number, a Preliminary Site Assessment was requested to evaluate the soils within the right-of-way.



According to the UST registration database, the USTs on the property were operated under Facility Number 0-002268. The operator and owner of the tanks are listed as follows:

Owner

M.M. Fowler, Inc.  
4220 Neal Road  
Durham, North Carolina 27705-2322  
(919) 309-2925

Operator

Joyland BP  
2406 Holloway Street  
Durham, North Carolina 27703  
(919) 309-2925

### **Site Assessment Activities**

On October 22, 2003, Earth Tech mobilized to the site to conduct a Geoprobe® direct push investigation to evaluate soil conditions within the proposed right-of-way. Continuous sampling using direct push technology (Regional Probing of Raleigh, North Carolina) resulted in generally good recovery of soil samples from the direct-push holes. Soil samples were collected and contained in 4-foot long acetate sleeves inside the direct push sampler. Each of these sleeves was divided in half for soil sample screening. Each 2-foot interval was placed in a resealable plastic bag and the bag was set aside for a sufficient amount of time to allow volatilization of organic compounds from the soil to the bag headspace. The probe of a flame ionization detector/photo ionization detector (FID/PID) was inserted into the bag and the reading was recorded. After terminating the sample hole, the soil sample from the depth interval with the highest FID/PID reading was submitted to Prism Laboratories, Inc., in Charlotte, North Carolina, using standard chain-of-custody procedures. The laboratory analyzed the soil samples for total petroleum hydrocarbons (TPH) using extraction methods 3550 (diesel fuel/fuel oil) and 5030 (gasoline).

Nine direct-push holes (MF-1 through MF-9) were advanced within the right-of-way at the site to depths ranging from 6 to 8 feet (Figure 2 and Attachment A). These borings were placed to evaluate soil conditions in a cut section and proposed drop inlet locations on the property. Borings MF-4 and MF-6 were located to evaluate proposed drop inlet locations. Borings MF-1 through MF-3 and MF-5 were located along Holloway Street to evaluate the soil conditions in a proposed cut section. Borings MF-7 through MF-9 were located to evaluate soil conditions near the USTs along Hoover Road (Attachment B). The lithology encountered by the direct-push samples generally was consistent throughout the site. The ground surface was covered with about 4 inches of concrete or topsoil. Below the surface treatment was a medium brown silty sand or medium to chocolate brown silty clay. No groundwater was observed in any of the borings. Boring MF-6 was terminated at equipment refusal at a depth 6.5 feet and boring MF-7 at a depth of 6 feet. All other borings were terminated at a depth of 8 feet, the maximum depth of the proposed drainage lines. Based on field screening, soil samples from a variety of

depths were submitted for laboratory analysis, which are summarized in Table 1. Because no groundwater was encountered, no groundwater sample was collected for analysis.

### **Analytical Results**

Based on the laboratory reports, summarized in Table 1 and presented in Attachment C, petroleum hydrocarbon compounds were detected in six of the nine soil samples collected from the site (Figure 3). Total petroleum hydrocarbons (TPH) concentrations identified as diesel fuel were detected in soil sample MF-2 at a concentration of 40 milligrams per kilogram (mg/kg), in soil sample MF-4 at a concentration of 15 mg/kg, in soil sample MF-7 at a concentration of 17 mg/kg, in soil sample MF-8 at a concentration of 22 mg/kg, and in soil sample MF-9 at a concentration of 19 mg/kg. TPH concentrations identified as gasoline were detected in soil sample MF-2 at a concentration of 580 mg/kg, in soil sample MF-3 at a concentration of 570 mg/kg, in soil sample MF-7 at a concentration of 12 mg/kg, in soil sample MF-8 at a concentration of 200 mg/kg, and in soil sample MF-9 at a concentration of 1.8 mg/kg. No other soil sample contained detectable TPH concentrations. According to the North Carolina Underground Storage Tank Section's Underground Storage Tank Closure Policy dated August 24, 1998, the action level for TPH analyses is 10 mg/kg for both gasoline and diesel fuel. However, that agency's "Guidelines for Assessment and Corrective Action," dated April, 2001, does not allow for use of TPH analyses for confirmation of the extent of petroleum contamination or its cleanup. As a result, while TPH concentrations are no longer applicable in confirming if soil contamination is present, this analysis is a legitimate screening tool. Based on the TPH action level for UST closures, the assumed action level is 10 mg/kg. The soil sample from borings MF-2, MF-3, MF-4, MF-7, MF-8, and MF-9 contained TPH concentrations above the 10 mg/kg assumed action level.

### **Conclusions and Recommendations**

A Preliminary Site Assessment was conducted to evaluate the M.M. Fowler, Inc., Property (Parcel #016) at 2406 Holloway Street in Durham, Durham County, North Carolina. A total of nine soil borings were advanced to evaluate the soil conditions in a cut section on the proposed right-of-way and at proposed drop inlet locations at the property. The laboratory reports of six of the nine soil samples from these borings suggest that diesel fuel or gasoline is present above the detection limits. No groundwater sample was collected for analysis to evaluate the groundwater conditions.

To evaluate the volume of soil requiring possible remediation, an isoconcentration map for TPH concentrations above 10 mg/kg (Figure 3) was constructed using the analytical data. The volume of potentially contaminated soil for this site was estimated based on the 10-mg/kg isoconcentration contours. From this map, two areas of potential contamination are present, one in front of the pump islands along Holloway Street and one along Hoover Road at the USTs.



The analytical results of the soil sample from borings MF-2, MF-3, and MF-4 indicate a concentration of 580 mg/kg gasoline, 570 mg/kg gasoline, and 15 mg/kg diesel fuel, respectively. The soil samples from borings MF-1 and MF-5 contained no detectable TPH concentrations. For the purpose of estimating the volume of contaminated soil in the right-of-way, Earth Tech has assumed (from the field screening data in Table 1) an average contaminated soil thickness of 4 feet with a geometry as shown on Figure 3. Based on a contamination thickness of 4 feet with a width of 15 feet and a length of 115 feet, a volume of approximately 255 cubic yards of contaminated soil is estimated on the right-of-way in this area.

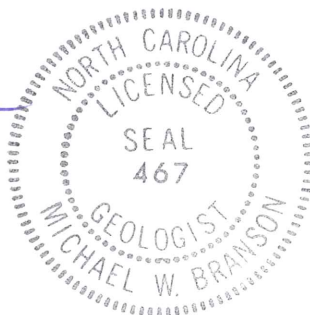
The analytical results of the soil sample from borings MF-7, MF-8, and MF-9 indicate a concentration of 17 mg/kg diesel fuel, 200 mg/kg gasoline, and 19 mg/kg diesel fuel, respectively. The soil sample from boring MF-6 contained no detectable TPH concentrations. No borings were advanced south of MF-9 because of the property line. For the purpose of estimating the volume of contaminated soil in the right-of-way, Earth Tech has assumed (from the field screening data in Table 1) an average contaminated soil thickness of 6 feet with a geometry as shown on Figure 3. Based on a contamination thickness of 6 feet with a width of 10 feet and a length of 45 feet, a volume of approximately 100 cubic yards of contaminated soil is estimated on the right-of-way in this area.

The volumes estimated above were calculated from TPH analytical data, which is no longer valid for remediation of sites reported after January 2, 1998. After this date, MADEP EPH/VPH and EPA Method 8260/8270 analyses will likely be required to confirm cleanup. However, these analyses do not correlate exactly with TPH data and, as a result, the actual volume of contaminated soil may be significantly higher or lower. Earth Tech recommends that a copy of this report be submitted to the Division of Waste Management, UST Section, in the Raleigh Regional Office. If you have any questions, please contact me at (919)854-6238.

Sincerely,



Michael W. Branson, P.G.  
Project Manager



Attachments

c: Project File

TABLE 1

**FIELD SCREENING AND ANALYTICAL RESULTS  
M.M. FOWLER, INC., PROPERTY (PARCEL #016)  
DURHAM, DURHAM COUNTY, NORTH CAROLINA  
NCDOT PROJECT NO. 8.1352402 (U-4010)  
EARTH TECH PROJECT NO. 71465**

LOCATION	DEPTH (ft)	FID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED TPH ACTION LEVEL (mg/kg)
MF-1	0 - 2	0.26			
	2 - 4	0.41			
	4 - 6	0.55			
	6 - 8	3.42	MF-1	3550 (BQL) 5030 (BQL)	10 10
MF-2	0 - 2	0.1			
	2 - 4	691			
	4 - 6	1471	MF-2	<b>3550 (40)</b> <b>5030 (580)</b>	10 10
	6 - 8	1393			
MF-3	0 - 2	1.23			
	2 - 4	1.54			
	4 - 6	432			
	6 - 8	1578	MF-3	3550 (BQL) <b>5030 (570)</b>	10 10
MF-4	0 - 2	15.6	MF-4	<b>3550 (15)</b> 5030 (BQL)	10 10
	2 - 4	14.2			
	4 - 6	4.19			
	6 - 8	2.95			
MF-5	0 - 2	1.7			
	2 - 4	2.9			
	4 - 6	27	MF-5	3550 (BQL) 5030 (BQL)	10 10
MF-6	0 - 2	2.2			
	2 - 4	2.6			
	4 - 6	2.7	MF-6	3550 (BQL) 5030 (BQL)	10 10
MF-7	0 - 2	78			
	2 - 4	7622	MF-7	<b>3550 (17)</b> <b>5030 (12)</b>	10 10
	4 - 6	97			
MF-8	0 - 2	81			
	2 - 4	5.90%	MF-8	<b>3550 (22)</b> <b>5030 (200)</b>	10 10
	4 - 6	4025			
	6 - 8	5679			
MF-9	0 - 2	2872			
	2 - 4	9258	MF--9	<b>3550 (19)</b> 5030 (1.8)	10 10
	4 - 6	387			
	6 - 8	687			

3550 - High boiling point TPH fraction (diesel fuel/fuel oil).

5030 - Low boiling point TPH fraction (gasoline).

BQL - Below quantitation limit.

ppm - parts per million.

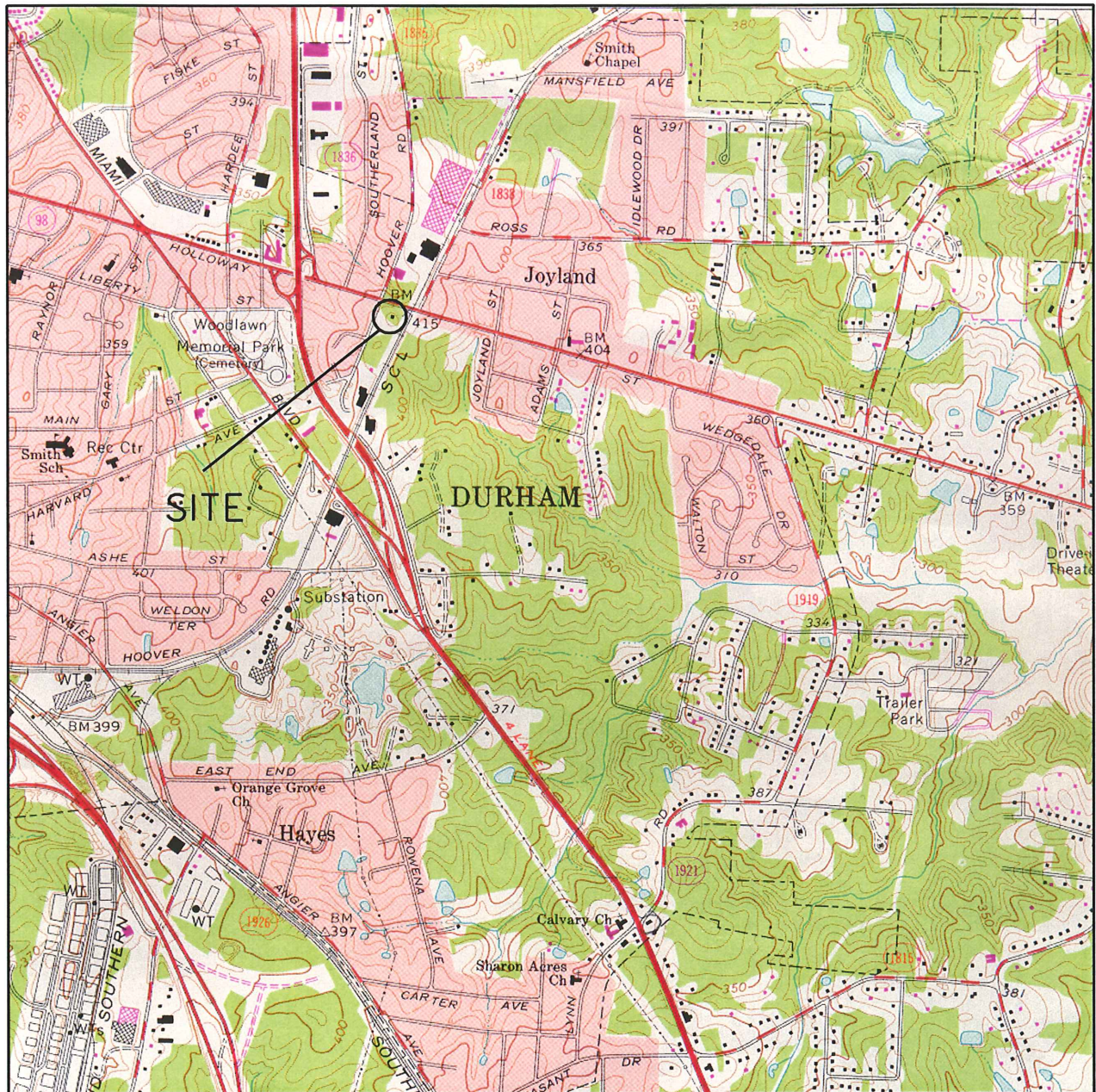
mg/kg - milligrams per kilogram.

**BOLD** area indicates that concentration is above the assumed action level.

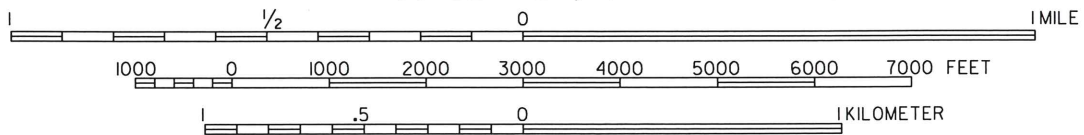
FID readings above 10,000 ppm expressed as percentage.



## FIGURES



SCALE 1:24,000



SOURCE: U.S. GEOLOGICAL SURVEY 7.5 MIN QUADRANGLE: SOUTHEAST DURHAM, NC (1981)

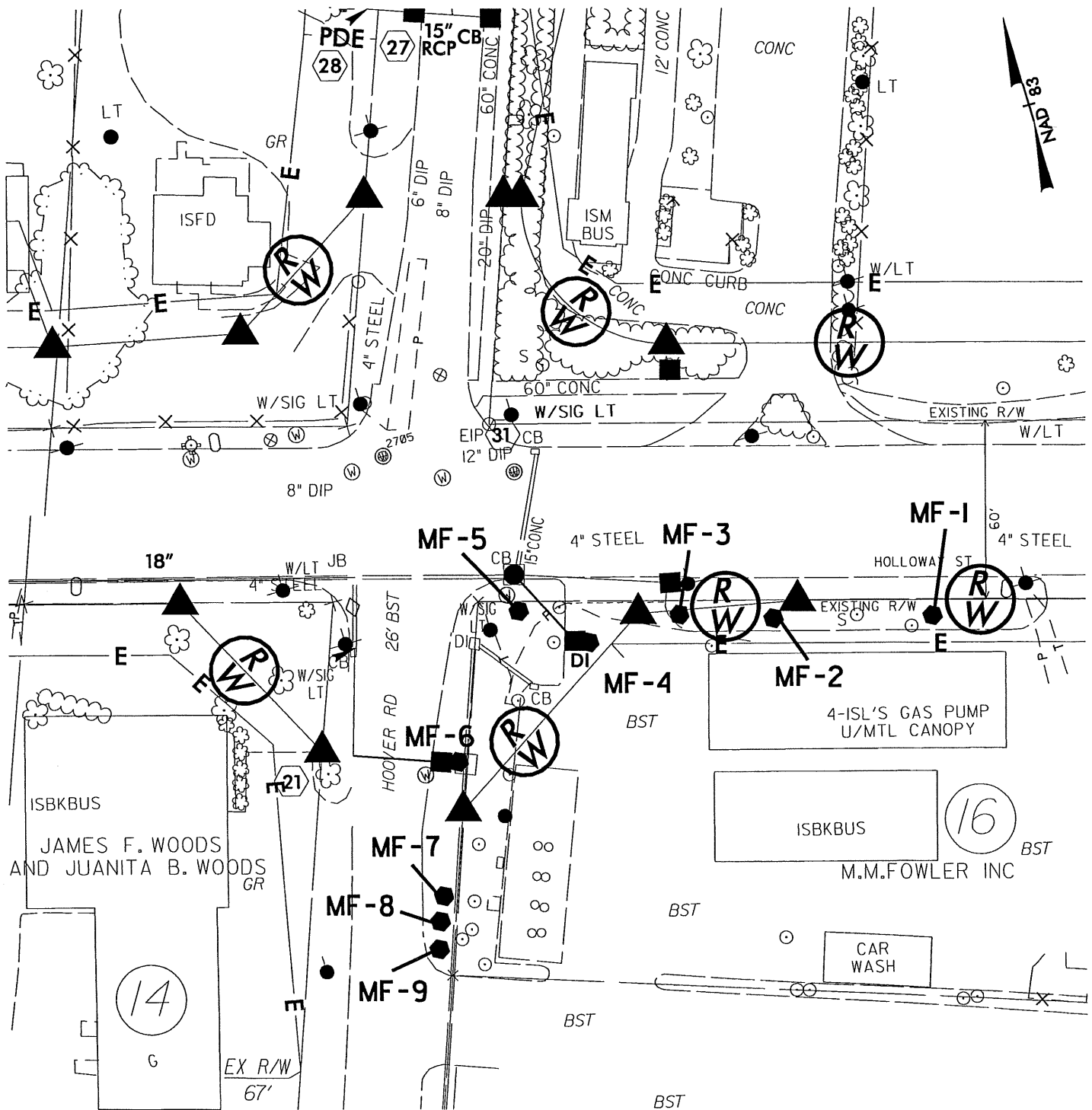


## FIGURE 1 LOCATION MAP

M.M. FOWLER, LLC, PROPERTY (PARCEL #016)  
DURHAM, DURHAM COUNTY, NORTH CAROLINA

DECEMBER 2003

71465



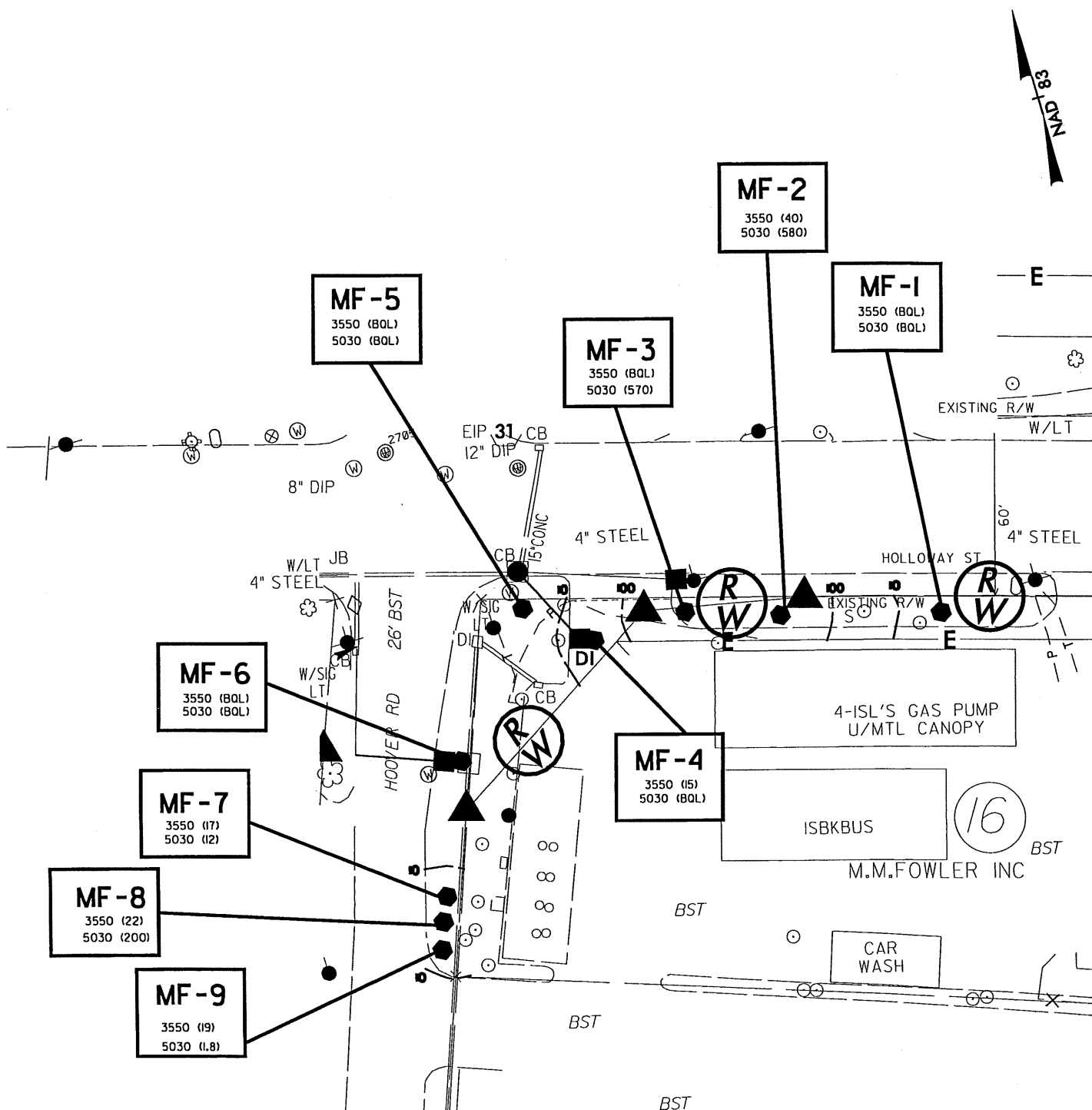
**LEGEND**

MF-1

● SOIL SAMPLE LOCATION AND IDENTIFICATION

0 25 50  
GRAPHIC SCALE (FEET)





EARTH TECH



DECEMBER 2003

71465

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## **ATTACHMENT A**

# TEST BORING REPORT

PROJECT M. M. FOWLER, INC., PROPERTY (PARCEL #016)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER MF-1  
 PAGE 1  
 GPS LOCATION N35°59'24.884" W78°51'32.469"  
 DATE 10/22/03  
 DRILLE OPPER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			0.26		2" TOPSOIL, MEDIUM BROWN SILTY SAND TO SANDY SILT, DRY, NO ODOR.
			0.41		AS ABOVE, DRY, NO ODOR.
10.0			0.55		AS ABOVE WITH CLAY INCREASING, DRY, NO ODOR.
			3.42		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
15.0					BORING TERMINATED AT 8 FEET.
20.0					



# TEST BORING REPORT

PROJECT M. M. FOWLER, INC., PROPERTY (PARCEL #016)

CLIENT NCDOT 8.1352402 (U-4010)

PROJECT NUMBER 71465

CONTRACTOR REGIONAL PROBING

EQUIPMENT GEOPROBE

BORING NUMBER MF-2

PAGE 1

GPS LOCATION N35°59'25.013" W78°51'32.957"

DATE 10/22/03

DRILLE OPFER

PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0.10		2" TOPSOIL, MEDIUM BROWN COARSE SAND, DRY, NO ODOR.
			691		MEDIUM BROWN SILTY CLAY TO CLAYEY SILT, DRY, STRONG ODOR.
			1471		AS ABOVE, DRY, MODERATE ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
5.0					
			1393		AS ABOVE, DRY, MODERATE ODOR.
					BORING TERMINATED AT 8 FEET.
10.0					
15.0					
20.0					

# TEST BORING REPORT

PROJECT M. M. FOWLER, INC., PROPERTY (PARCEL #016)

CLIENT NCDOT 8.1352402 (U-4010)

PROJECT NUMBER 71465

CONTRACTOR REGIONAL PROBING

EQUIPMENT GEOPROBE

BORING NUMBER MF-3

PAGE 1

GPS LOCATION N35°59'25.132" W78°51'33.235"

DATE 10/22/03

DRILLE OPPER

PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			1.23		2" TOPSOIL, MEDIUM BROWN SILTY CLAY TO CLAYEY SILT, DRY, NO ODOR.
			1.54		AS ABOVE, DRY, NO ODOR.
10.0			432		AS ABOVE, DRY, MODERATE ODOR.
			1578		AS ABOVE, DRY, STRONG ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
15.0					
20.0					BORING TERMINATED AT 8 FEET.

# TEST BORING REPORT

PROJECT M. M. FOWLER, INC., PROPERTY (PARCEL #016)

CLIENT NCDOT 8.1352402 (U-4010)

PROJECT NUMBER 71465

CONTRACTOR REGIONAL PROBING

EQUIPMENT GEOPROBE

BORING NUMBER MF-4

PAGE 1

GPS LOCATION N35°59'25.154" W78°51'33.913"

DATE 10/22/03

DRILLE OPFER

PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			15.6		6" CONCRETE, MEDIUM BROWN SILTY SAND/SANDY SILT, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			14.2		AS ABOVE, DRY, NO ODOR.
			4.19		MEDIUM TO LIGHT CHOCOLATE BROWN SILTY CLAY TO CLAYEY SILT, DRY, NO ODOR.
			2.95		AS ABOVE, DRY, NO ODOR.
10.0					BORING TERMINATED AT 8 FEET.
15.0					
20.0					

# TEST BORING REPORT

**PROJECT M. M. FOWLER, INC., PROPERTY (PARCEL #016)**

**CLIENT** NCDOT 8.1352402 (U-4010)

**PROJECT NUMBER** 71465

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97	97
98	98
99	99
100	100

EQUIPMENT	GEOPROBE
-----------	----------

**BORING NUMBER** MF-5

**PAGE** 1

**GPS LOCATION** N35°59'25.292" W78°51'34.076"

DATE 10/22/03

**DRILLE** OPPER

PREPARED BY BRANSON

[illegible]

# TEST BORING REPORT

PROJECT M. M. FOWLER, INC., PROPERTY (PARCEL #016)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER MF-6  
 PAGE 1  
 GPS LOCATION N35°59'24.825" W78°51'34.451"  
 DATE 10/22/03  
 DRILLE OPPER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			2.2		2" TOPSOIL, MEDIUM TO LIGHT CHOCOLATE BROWN SILTY SAND TO SANDY SILT, DRY, NO ODOR.
			2.6		AS ABOVE, DRY, NO ODOR.
			2.7		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0					EQUIPMENT REFUSAL AT 6.5 FEET.
15.0					
20.0					

# TEST BORING REPORT

PROJECT M. M. FOWLER, INC., PROPERTY (PARCEL #016)

BORING NUMBER MF-7

CLIENT NCDOT 8.1352402 (U-4010)

PAGE 1

PROJECT NUMBER 71465

GPS LOCATION N35°59'24.493" W78°51'34.651"

CONTRACTOR REGIONAL PROBING

DATE 10/22/03

EQUIPMENT GEOPROBE

DRILLE OPPER

PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			78		2" TOPSOIL, MEDIUM TO LIGHT CHOCOLATE BROWN SILTY SAND TO SANDY SILT, DRY, NO ODOR.
			7622		AS ABOVE, DRY, STRONG ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0			97		AS ABOVE, DRY, MODERATE ODOR.
15.0					
20.0					



# TEST BORING REPORT

PROJECT M. M. FOWLER, INC., PROPERTY (PARCEL #016)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER MF-8  
 PAGE 1  
 GPS LOCATION N35°59'24.406" W78°51'34.695"  
 DATE 10/22/03  
 DRILLE OPPER  
 PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			81		2" TOPSOIL, MEDIUM BROWN SILTY SAND, DRY, SLIGHT ODOR.
			5.9%		MEDIUM TO DARK GRAY COARSE-GRAINED SAND AND PEA GRAVEL (TANK BACKFILL?), MOIST, SLIGHT ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			4025		MEDIUM TO LIGHT CHOCOLATE BROWN SILTY SAND TO SANDY SILT, DRY, STRONG ODOR.
			5679		AS ABOVE, DRY, STRONG ODOR.
10.0					
15.0					
20.0					

# TEST BORING REPORT

PROJECT M. M. FOWLER, INC., PROPERTY (PARCEL #016)

CLIENT NCDOT 8.1352402 (U-4010)

PROJECT NUMBER 71465

CONTRACTOR REGIONAL PROBING

EQUIPMENT GEOPROBE

BORING NUMBER MF-9

PAGE 1

GPS LOCATION N35°59'24.344" W78°51'34.729"

DATE 10/22/03

DRILLE OPPER

PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			2872		2" TOPSOIL, MEDIUM TO LIGHT CHOCOLATE BROWN SILTY SAND TO SANDY SILT, DRY, MODERATE ODOR.
			9258		AS ABOVE, DRY, STRONG ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			387		AS ABOVE, DRY, STRONG ODOR.
10.0			687		AS ABOVE, DRY, STRONG ODOR.
15.0					
20.0					

## **ATTACHMENT B**



M.M. FOWLER, LLC, PROPERTY (PARCEL #016) - HOOVER ROAD R/W

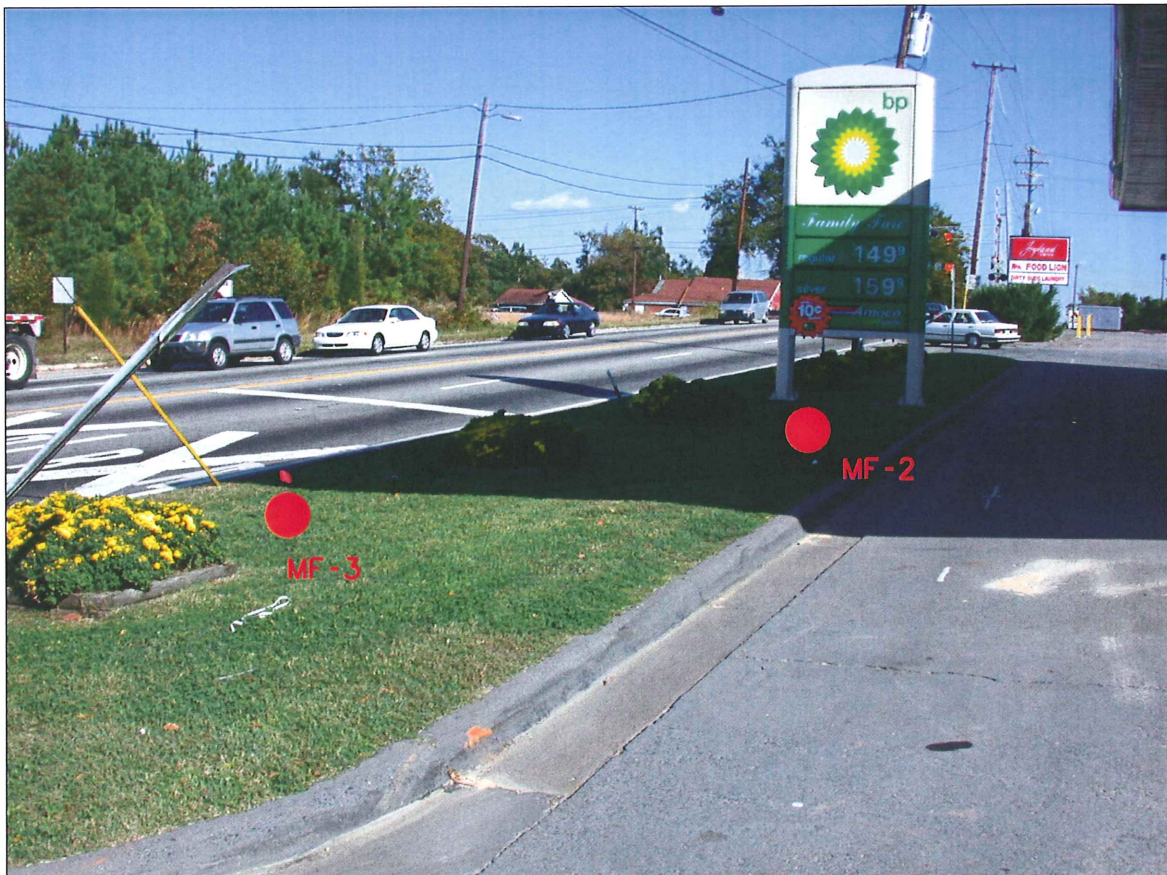


M.M. FOWLER, LLC, PROPERTY (PARCEL #016) - HOLLOWAY STREET R/W



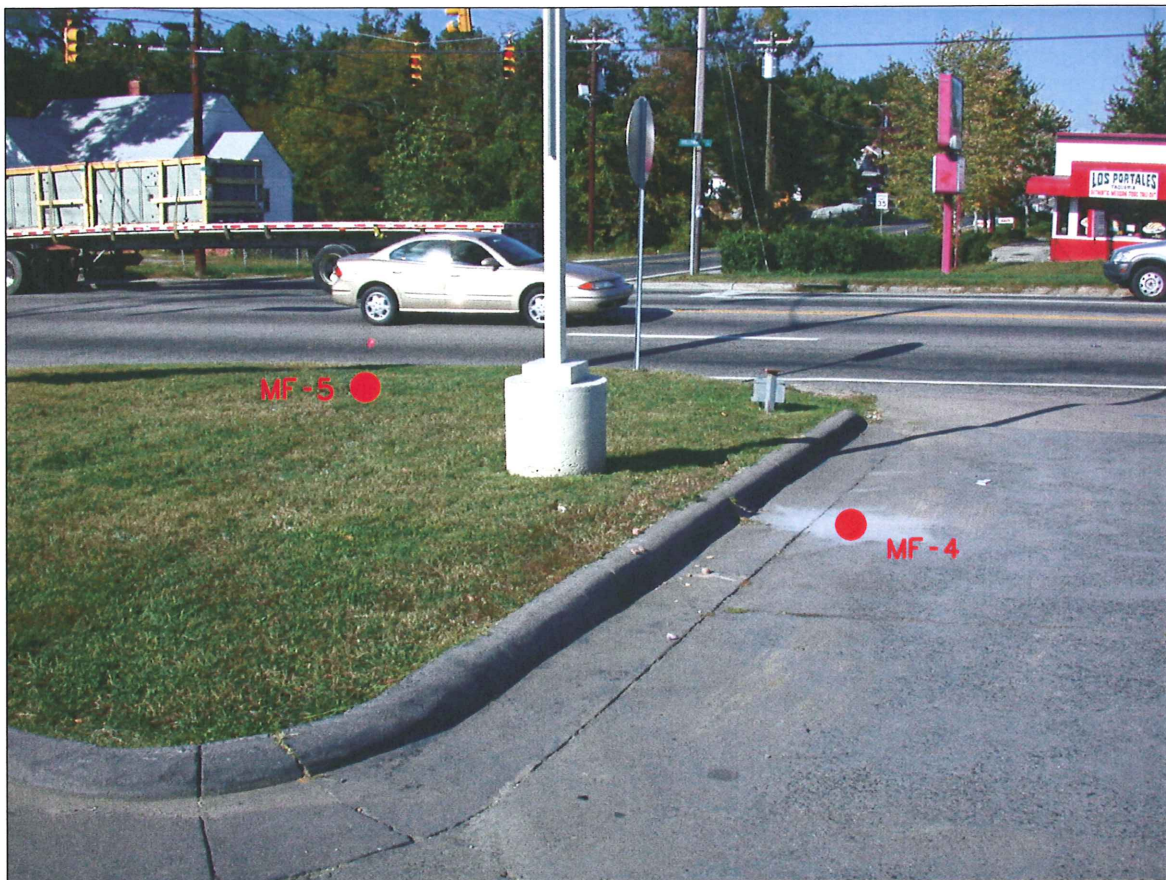


M.M. FOWLER, LLC, PROPERTY (PARCEL #016)



M.M. FOWLER, LLC, PROPERTY (PARCEL #016)





M.M. FOWLER, LLC, PROPERTY (PARCEL #016)



M.M. FOWLER, LLC, PROPERTY (PARCEL #016)





M.M. FOWLER, LLC, PROPERTY (PARCEL #016)

## **ATTACHMENT C**

# Lab Report



## Case Narrative

Date: 11/6/03

**Company:** Earth Tech Remediation Services  
**Contact:** Michael Branson  
**Address:** 701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Client Project ID:** Durham-Fowler  
**Prism Log-In Group No:** 3245L10

The attached Laboratory Report contains the analytical results for the project identified above and includes Quality Control Data and a Chain-of-Custody copy.

Data qualifiers are flagged individually on each sample. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Please call if you have any questions relating to this analytical report.

**Data Reviewed by:** Paula Gilleland  
**Signature:** Paula A. Gilleland  
**Review Date:** 11-6-03

**Project Manager:** Angela Overcast  
**Signature:** Angela Overcast  
**Approval Date:** 11/7/03

Note: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc.

F:\common\casenarrative

# Lab Report



11/6/03

Page 1 of 11

Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Fowler  
**Customer Sample ID:** MF-1  
**Prism Sample ID:** AC97931    Matrix: soil  
**Login Group:** 3245L10  
**Sample Collection Date/Time:** 10/22/03    13:00  
**Lab Submittal Date/Time:** 10/27/03    14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/28/03 04:19	EHT
SURR: GRO	93	%	34-128	8015B/5030	10/28/03 04:19	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/28/03 04:19	EHT
-----						
CALCULATIONS BASED ON DRY WT.	81	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.04g-1mL			SW846-3545	10/27/03 15:45	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	10/29/03 01:21	JMV
SURR: o-TERPHENYL	61	%	20-151	SW846-8015B	10/29/03 01:21	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/29/03 01:21	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# Lab Report



11/6/03

Page 2 of 11

Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Fowler  
**Customer Sample ID:** MF-2  
**Prism Sample ID:** AC97932    Matrix: soil  
**Login Group:** 3245L10  
**Sample Collection Date/Time:** 10/22/03    13:20  
**Lab Submittal Date/Time:** 10/27/03    14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	580	mg/kg	20	8015B/5030	10/31/03 00:49	EHT
SURR: GRO	94	%	34-128	8015B/5030	10/31/03 00:49	EHT
DILUTION FACTOR	100	mg/kg		8015B/5030	10/31/03 00:49	EHT
-----						
CALCULATIONS BASED ON DRY WT.	81	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.07g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	40	mg/kg	10	SW846-8015B	11/3/03 08:18	JMV
SURR: o-TERPHENYL	58	%	20-151	SW846-8015B	11/3/03 08:18	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	11/3/03 08:18	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409



# Lab Report



11/6/03

Page 3 of 11

Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Fowler  
**Customer Sample ID:** MF-3  
**Prism Sample ID:** AC97933    Matrix: soil  
**Login Group:** 3245L10  
**Sample Collection Date/Time:** 10/22/03    13:40  
**Lab Submittal Date/Time:** 10/27/03    14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	570	mg/kg	20	8015B/5030	10/31/03 17:28	EHT
SURR: GRO	92	%	34-128	8015B/5030	10/31/03 17:28	EHT
DILUTION FACTOR	100	mg/kg		8015B/5030	10/31/03 17:28	EHT
-----						
CALCULATIONS BASED ON DRY WT.	80	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.00g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	Less than	mg/kg	10	SW846-8015B	11/3/03 10:00	JMV
SURR: o-TERPHENYL	99	%	20-151	SW846-8015B	11/3/03 10:00	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	11/3/03 10:00	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# Lab Report



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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Fowler  
**Customer Sample ID:** MF-4  
**Prism Sample ID:** AC97934    Matrix: soil  
Login Group: 3245L10  
Sample Collection Date/Time: 10/22/03    13:50  
Lab Submittal Date/Time: 10/27/03    14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/30/03 06:08	EHT
SURR: GRO	82	%	34-128	8015B/5030	10/30/03 06:08	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/30/03 06:08	EHT
-----						
CALCULATIONS BASED ON DRY WT.	79	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.20g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	15	mg/kg	10	SW846-8015B	10/31/03 18:43	JMV
SURR: o-TERPHENYL	80	%	20-151	SW846-8015B	10/31/03 18:43	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/31/03 18:43	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

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# Lab Report



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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Fowler  
**Customer Sample ID:** MF-5  
**Prism Sample ID:** AC97935    Matrix: soil  
**Login Group:** 3245L10  
**Sample Collection Date/Time:** 10/22/03    14:40  
**Lab Submittal Date/Time:** 10/27/03    14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/30/03 06:45	EHT
SURR: GRO	72	%	34-128	8015B/5030	10/30/03 06:45	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/30/03 06:45	EHT
-----						
CALCULATIONS BASED ON DRY WT.	81	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.08g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	Less than	mg/kg	10	SW846-8015B	11/3/03 10:45	JMV
SURR: o-TERPHENYL	89	%	20-151	SW846-8015B	11/3/03 10:45	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	11/3/03 10:45	JMV
-----						

Sample Comments:

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# Lab Report



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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: **Durham-Fowler**  
Customer Sample ID: **MF-6**  
Prism Sample ID: **AC97936** Matrix: soil  
Login Group: 3245L10  
Sample Collection Date/Time: 10/22/03 14:45  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/29/03 22:14	EHT
SURR: GRO	88	%	34-128	8015B/5030	10/29/03 22:14	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/29/03 22:14	EHT
-----						
CALCULATIONS BASED ON DRY WT.	86	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.01g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	10/31/03 07:52	JMV
SURR: o-TERPHENYL	80	%	20-151	SW846-8015B	10/31/03 07:52	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/31/03 07:52	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

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# Lab Report



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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: **Durham-Fowler**  
Customer Sample ID: **MF-7**  
Prism Sample ID: **AC97937** Matrix: soil  
Login Group: 3245L10  
Sample Collection Date/Time: 10/22/03 15:00  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	12	mg/kg	2.0	8015B/5030	10/31/03 19:24	EHT
SURR: GRO	87	%	34-128	8015B/5030	10/31/03 19:24	EHT
DILUTION FACTOR	10	mg/kg		8015B/5030	10/31/03 19:24	EHT
-----						
CALCULATIONS BASED ON DRY WT.	86	% DRY WT.	0.01	SM 2540 G	10/29/03 09:35	JDP
PREP. METHOD 3545 FOR DIESEL	25.25g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	17	mg/kg	10	SW846-8015B	11/3/03 11:30	JMV
SURR: o-TERPHENYL	98	%	20-151	SW846-8015B	11/3/03 11:30	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	11/3/03 11:30	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

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# Lab Report



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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: **Durham-Fowler**  
Customer Sample ID: **MF-8**  
Prism Sample ID: **AC97938** Matrix: soil  
Login Group: 3245L10  
Sample Collection Date/Time: 10/22/03 15:10  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	200	mg/kg	20	8015B/5030	10/31/03 03:15	EHT
SURR: GRO	88	%	34-128	8015B/5030	10/31/03 03:15	EHT
DILUTION FACTOR	100	mg/kg		8015B/5030	10/31/03 03:15	EHT
-----						
CALCULATIONS BASED ON DRY WT.	92	% DRY WT.	0.01	SM 2540 G	10/29/03 09:35	JDP
PREP. METHOD 3545 FOR DIESEL	25.12g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	22	mg/kg	10	SW846-8015B	10/31/03 23:13	JMV
SURR: o-TERPHENYL	DO	%	20-151	SW846-8015B	10/31/03 23:13	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/31/03 23:13	JMV
-----						

#### Sample Comments:

Analysis note for DRO: The surrogate was diluted out.

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# Lab Report



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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Fowler  
**Customer Sample ID:** MF-9  
**Prism Sample ID:** AC97939 Matrix: soil  
Login Group: 3245L10  
Sample Collection Date/Time: 10/22/03 15:20  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	1.8	mg/kg	1.0	8015B/5030	10/29/03 22:50	EHT
SURR: GRO	81	%	34-128	8015B/5030	10/29/03 22:50	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/29/03 22:50	EHT
-----						
CALCULATIONS BASED ON DRY WT.	85	% DRY WT.	0.01	SM 2540 G	10/29/03 09:35	JDP
PREP. METHOD 3545 FOR DIESEL	25.20g-1mL			SW846-3545	10/29/03 12:25	CWC
DIESEL RANGE ORGANICS (DRO)	19	mg/kg	10	SW846-8015B	11/3/03 12:15	JMV
SURR: o-TERPHENYL	78	%	20-151	SW846-8015B	11/3/03 12:15	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	11/3/03 12:15	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

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# Lab Report



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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Fowler  
**Customer Sample ID:** QC  
**Prism Sample ID:** AC97940      Matrix: n/a  
**Login Group:** 3245L10  
**Sample Collection Date/Time:** 10/22/03  
**Lab Submittal Date/Time:** 10/27/03      14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
-------------------	----------------	-------	--------------------	---------------------	----------------------	---------

## DRO QC REPORT

xDRO-8015/MOD 10/28/03 11:35 JMV

QC DATA FOR DRO / 3550  
Batch ID: SDRO-102803  
Spiked Sample: AC97637

	True Value mg/kg	Observed mg/kg	% Recovery	Acceptance Range
Method Blank	N/A	< 10	N/A	< 10
Blank Spike	80.0	87.4	109	54-143%
Matrix Spike	80.0	75.0	94	44-147%
MS Duplicate	80.0	76.0	95	44-147%
RPD			1	< 36%

## GRO QC REPORT

xGRO/8015MOD 10/28/03 18:50 EHT

QC DATA FOR 8015 / GRO SOILS  
Batch ID: VGCE-102903  
Spiked sample: AC97935

	True Value mg/kg	Observed mg/kg	% Recovery	Acceptance Range
Method Blank	N/A	< 1.0	N/A	< 1.0
LCS	2.0	1.61	81	64-124%
Matrix Spike	2.0	1.62	81	37-126%
MS Duplicate	2.0	1.55	78	37-126%
RPD			4	< 34

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Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# Lab Report



11/6/03

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Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Durham-Fowler  
**Customer Sample ID:** QC  
**Prism Sample ID:** AC97940      Matrix: n/a  
Login Group: 3245L10  
Sample Collection Date/Time: 10/22/03  
Lab Submittal Date/Time: 10/27/03      14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
-------------------	----------------	-------	--------------------	---------------------	----------------------	---------

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409





December 18, 2003

701 Corporate Center Drive, Suite 475, Raleigh, North Carolina 27607

GEOTECHNICAL DEC 19 2003

Mr. Greg Smith  
North Carolina Department of Transportation  
Geotechnical Engineering Unit  
1589 Mail Service Center  
Raleigh, North Carolina 27699-1589

Reference: Preliminary Site Assessment  
Latin American Food, LLC, Property (Parcel #020)  
2502 Holloway Street  
Durham, Durham County, North Carolina  
NCDOT Project 8.1352402 (U-4010)  
WBS Element 35011.1.1  
Earth Tech Project No. 71465

Dear Mr. Smith:

Earth Tech of North Carolina, Inc., (Earth Tech) has completed the Preliminary Site Assessment conducted at the above-referenced property. The work was performed in accordance with the Technical and Cost proposal dated October 8, 2003, and the North Carolina Department of Transportation's (NCDOT's) Notice to Proceed dated October 13, 2003. Activities associated with the assessment consisted of collecting soil samples for laboratory analysis. The purpose of this report is to document the field activities, present the laboratory analyses, and provide recommendations regarding the property.

Telephone

919.854.6200

Facsimile

919.854.6259

### Location and Description

The Latin American Food, LLC, Property (Parcel #020) is located at 2502 Holloway Street (NC98) in Durham, Durham County, North Carolina (Figure 1). This location is approximately 100 feet north of the intersection of Holloway Street and Junction Road. Based on information supplied by the NCDOT and the site visit, Earth Tech understands that the site is a former convenience store/gas station where four 10,000-gallon underground storage tanks (USTs) have reportedly been removed. The property is currently in use as a restaurant. The proposed right-of-way does not affect the building or the former UST area, but it encompasses most of the front and sides of the former pump island area.

Earth Tech reviewed the North Carolina Department of Environment and Natural Resources (NCDENR) Incident Management database and Incident Number 18016 was listed for this location. According to the Incident Management Database, the incident was assigned when the facility was the Buy and Go Citgo. The contamination apparently was discovered during a pre-buy investigation when free product was observed in a monitoring well. The site was subsequently cleaned up and the incident was closed out in June 1999. Because of the presence of USTs and the incident



number, a Preliminary Site Assessment was requested to evaluate the soils within the right-of-way.

According to the UST registration database, the USTs on the property were operated under Facility Number 0-029947. The operator and owner of the tanks are listed as follows:

Owner

Cary Oil Company  
PO Box 4649, 8015 Chapel Hill Rd  
Cary, North Carolina 27519  
(919) 467-1836-6700

Operator

Latin American Food/Buy & Go  
2502 Holloway Street  
Durham, North Carolina 27703  
(919) 598-6770

**Site Assessment Activities**

On October 22, 2003, Earth Tech mobilized to the site to conduct a Geoprobe® direct push investigation to evaluate soil conditions within the proposed right-of-way. Continuous sampling using direct push technology (Regional Probing of Raleigh, North Carolina) resulted in generally good recovery of soil samples from the direct-push holes. Soil samples were collected and contained in 4-foot long acetate sleeves inside the direct push sampler. Each of these sleeves was divided in half for soil sample screening. Each 2-foot interval was placed in a resealable plastic bag and the bag was set aside for a sufficient amount of time to allow volatilization of organic compounds from the soil to the bag headspace. The probe of a flame ionization detector/photo ionization detector (FID/PID) was inserted into the bag and the reading was recorded. After terminating the sample hole, the soil sample from the depth interval with the highest FID/PID reading was submitted to Prism Laboratories, Inc., in Charlotte, North Carolina, using standard chain-of-custody procedures. The laboratory analyzed the soil samples for total petroleum hydrocarbons (TPH) using extraction methods 3550 (diesel fuel/fuel oil) and 5030 (gasoline).

Five direct-push holes (LA-1 through LA-5) were advanced within the right-of-way at the site to a depth of 8 feet (Figure 2 and Attachment A). These borings were placed to evaluate soil conditions in a cut section on the property. Borings LA-1 and LA-2 were located in the likely pump island area in the proposed cut section. These borings encountered hydrocarbon odors and borings LA-3 through LA-5 were located to evaluate the extent of contamination (Attachment B). The lithology encountered by the direct-push samples generally was consistent throughout the site. The ground surface was covered with about 4 inches of concrete. Below the surface treatment was about 2 to 4 feet of a medium brown to mottled brown silty clay. Underlying this clay was a medium to chocolate brown clayey silt. No groundwater was observed in any of the borings. Based on field screening, soil samples from a variety of depths were submitted

for laboratory analysis, which are summarized in Table 1. Because no groundwater was encountered, no groundwater sample was collected for analysis.

### **Analytical Results**

Based on the laboratory reports, summarized in Table 1 and presented in Attachment C, petroleum hydrocarbon compounds were detected in four of the five soil samples collected from the site (Figure 3). Total petroleum hydrocarbons (TPH) concentrations identified as diesel fuel were detected in soil sample LA-1 at a concentration of 18 milligrams per kilogram (mg/kg) and in soil sample LA-2 at a concentration of 20 mg/kg. TPH concentrations identified as gasoline were detected in soil sample LA-4 at a concentration of 12 mg/kg and in soil sample LA-5 at a concentration of 1.2 mg/kg. No other soil sample contained detectable TPH concentrations. According to the North Carolina Underground Storage Tank Section's Underground Storage Tank Closure Policy dated August 24, 1998, the action level for TPH analyses is 10 mg/kg for both gasoline and diesel fuel. However, that agency's "Guidelines for Assessment and Corrective Action," dated April, 2001, does not allow for use of TPH analyses for confirmation of the extent of petroleum contamination or its cleanup. As a result, while TPH concentrations are no longer applicable in confirming if soil contamination is present, this analysis is a legitimate screening tool. Based on the TPH action level for UST closures, the assumed action level is 10 mg/kg. The soil sample from borings LA-1, LA-2, and LA-4 contained TPH concentrations above the 10 mg/kg assumed action level.

### **Conclusions and Recommendations**

A Preliminary Site Assessment was conducted to evaluate the Latin American Foods, LLC, Property (Parcel #020) at 2502 Holloway Street in Durham, Durham County, North Carolina. A total of five soil borings were advanced to evaluate the soil conditions in a cut section on the proposed right-of-way at the property. The laboratory reports of four of the five soil samples from these borings suggest that diesel fuel or gasoline is present above the detection limits. However, TPH concentrations above the assumed action level of 10 mg/kg were present only in soil samples from borings LA-1, LA-2, and LA-4. No groundwater sample was collected for analysis to evaluate the groundwater conditions.

To evaluate the volume of soil requiring possible remediation, an isoconcentration map for TPH concentrations above 10 mg/kg (Figure 3) was constructed using the analytical data. The volume of potentially contaminated soil for this site was estimated based on the 10-mg/kg isoconcentration contours.

The analytical results of the soil sample from borings LA-1 and LA-2 indicate a diesel fuel concentration of 18 and 20 mg/kg, respectively. The analytical results of the soil sample from boring LA-4 indicate a gasoline concentration of 12 mg/kg. The soil samples from the remaining borings either contained no detectable TPH concentrations or concentrations below the 10-mg/kg action level. For the purpose of estimating the volume of contaminated soil in the right-of-way, Earth Tech has assumed (from the field screening data in Table 1) an average contaminated soil thickness of 4 feet with a geometry as shown on Figure 3. Based on a contamination thickness of 4 feet with a width of 20 feet and a length of 50 feet, a volume of approximately 150 cubic yards of contaminated soil is estimated on the right-of-way in this area.

The volume estimated above was calculated from TPH analytical data, which is no longer valid for remediation of sites reported after January 2, 1998. After this date, MADEP EPH/VPH and EPA Method 8260/8270 analyses will likely be required to confirm cleanup. However, these analyses do not correlate exactly with TPH data and, as a result, the actual volume of contaminated soil may be significantly higher or lower. Earth Tech recommends that a copy of this report be submitted to the Division of Waste Management, UST Section, in the Raleigh Regional Office. If you have any questions, please contact me at (919)854-6238.

Sincerely,



Michael W. Branson, P.G.  
Project Manager



Attachments

c: Project File

TABLE 1

**FIELD SCREENING AND ANALYTICAL RESULTS**  
**LATIN AMERICAN FOODS PROPERTY (PARCEL #020)**  
**DURHAM, DURHAM COUNTY, NORTH CAROLINA**  
**NCDOT PROJECT NO. 8.1352402 (U-4010)**  
**EARTH TECH PROJECT NO. 71465**

LOCATION	DEPTH (ft)	FID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED TPH ACTION LEVEL (mg/kg)
LA-1	0 - 2	38			
	2 - 4	318			
	4 - 6	1029	LA-1	<b>3550 (18)</b> 5030 (BQL)	10 10
	6 - 8	83			
LA-2	0 - 2	1.51			
	2 - 4	1.51			
	4 - 6	25			
	6 - 8	78	LA-2	<b>3550 (20)</b> 5030 (BQL)	10 10
LA-3	0 - 2	0.96			
	2 - 4	1.02			
	4 - 6	1.24	LA-3	3550 (BQL) 5030 (BQL)	10 10
	6 - 8	1.15			
LA-4	0 - 2	28			
	2 - 4	30			
	4 - 6	89			
	6 - 8	2354	LA-4	3550 (BQL) <b>5030 (12)</b>	10 10
LA-5	0 - 2	17			
	2 - 4	93			
	4 - 6	215			
	6 - 8	675	LA-5	3550 (BQL) 5030 (1.2)	10 10

3550 - High boiling point TPH fraction (diesel fuel/fuel oil).

5030 - Low boiling point TPH fraction (gasoline).

BQL - Below quantitation limit.

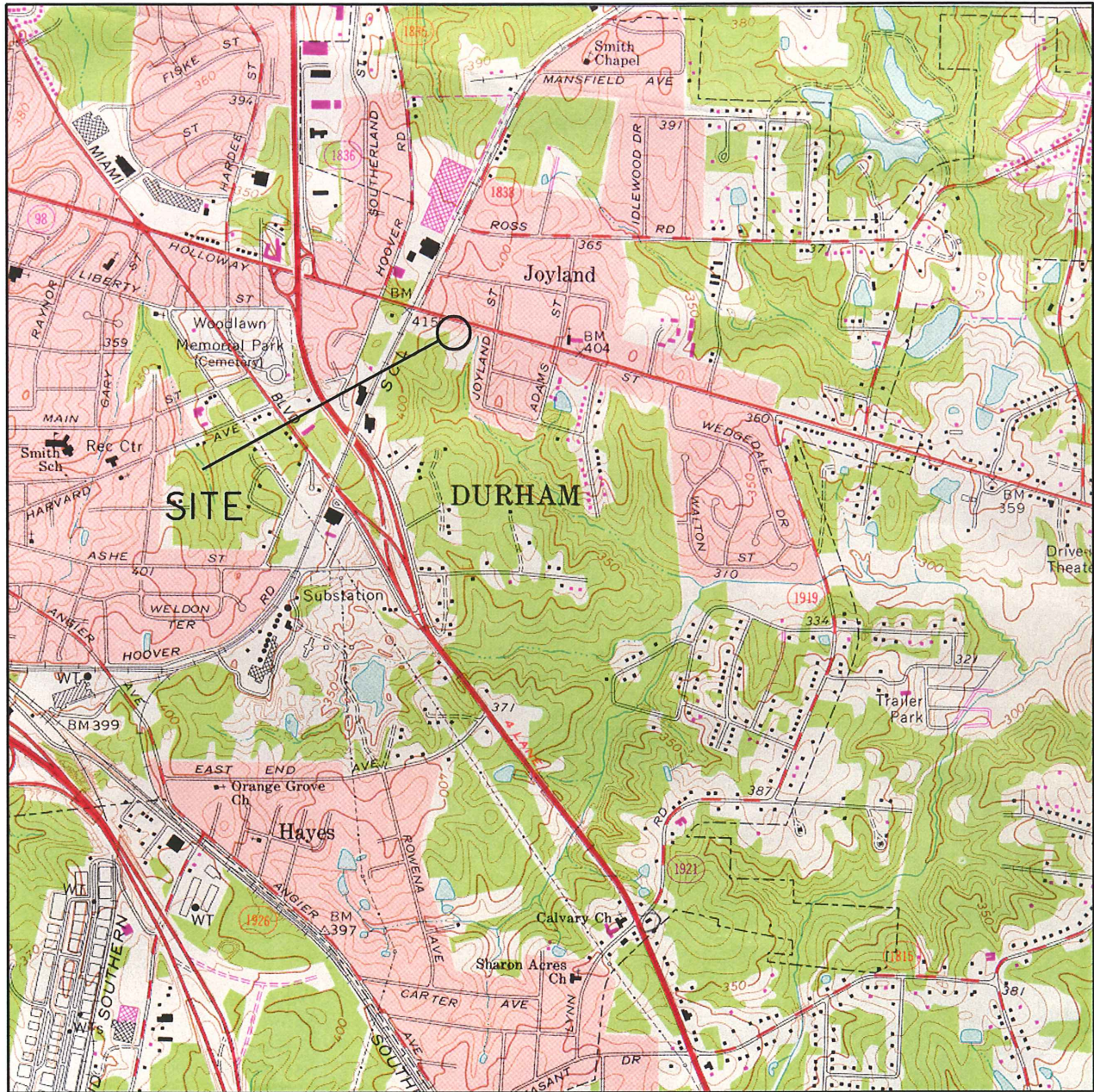
ppm - parts per million.

mg/kg - milligrams per kilogram.

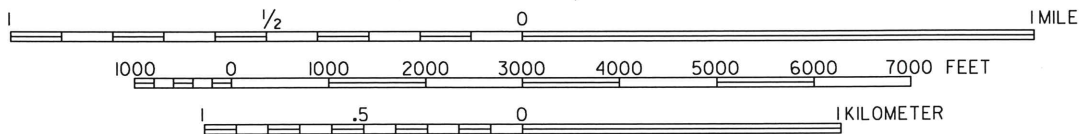
**BOLD** area indicates that concentration is above the assumed action level.



## FIGURES



SCALE 1:24,000



SOURCE: U.S. GEOLOGICAL SURVEY 7.5 MIN QUADRANGLE: SOUTHEAST DURHAM, NC (1981)

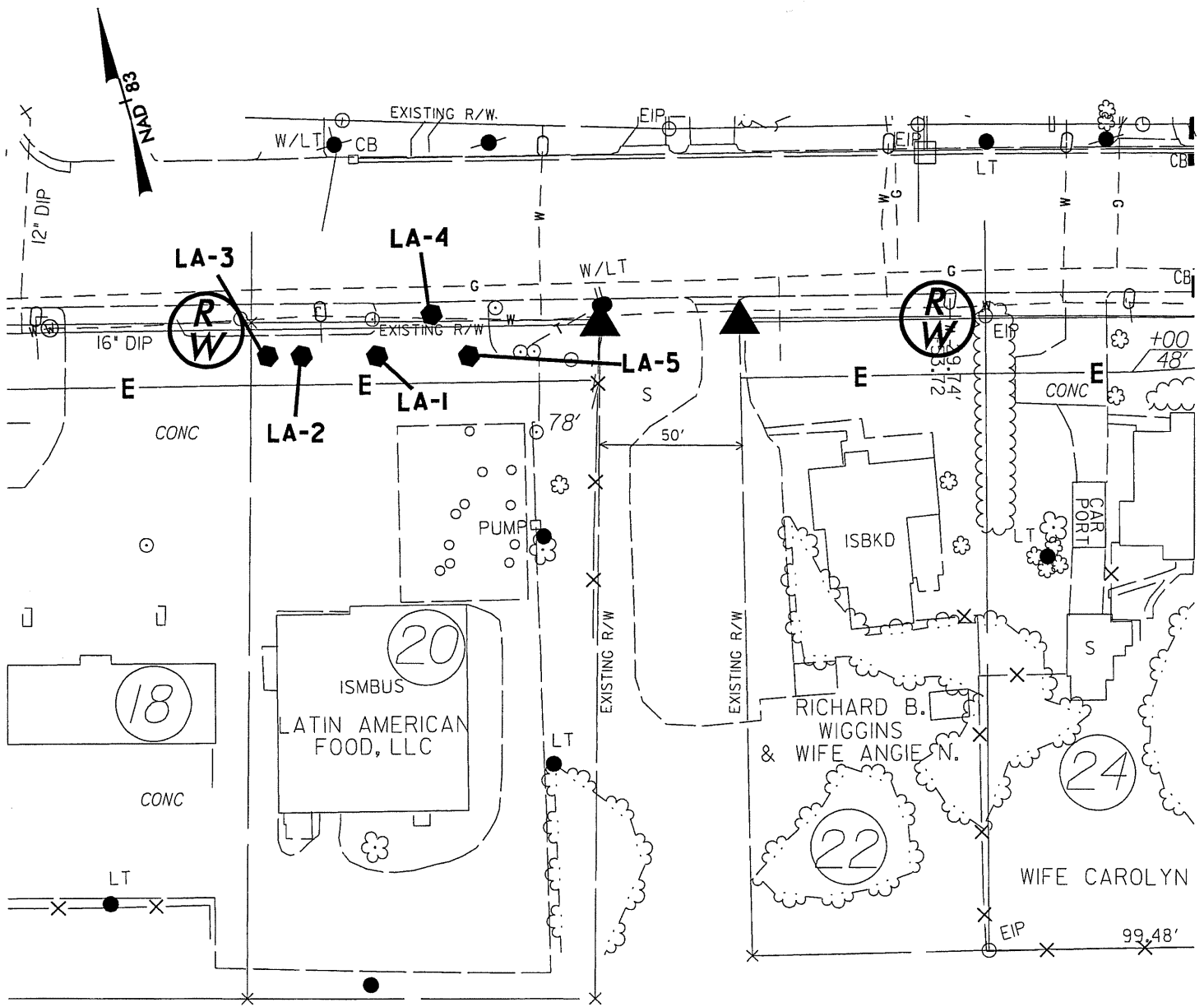


## FIGURE I LOCATION MAP

LATIN AMERICAN FOODS PROPERTY (PARCEL #020)  
DURHAM, DURHAM COUNTY, NORTH CAROLINA

DECEMBER 2003

71465

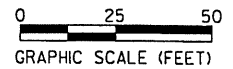


**LEGEND**

LA-1



SOIL SAMPLE LOCATION AND IDENTIFICATION



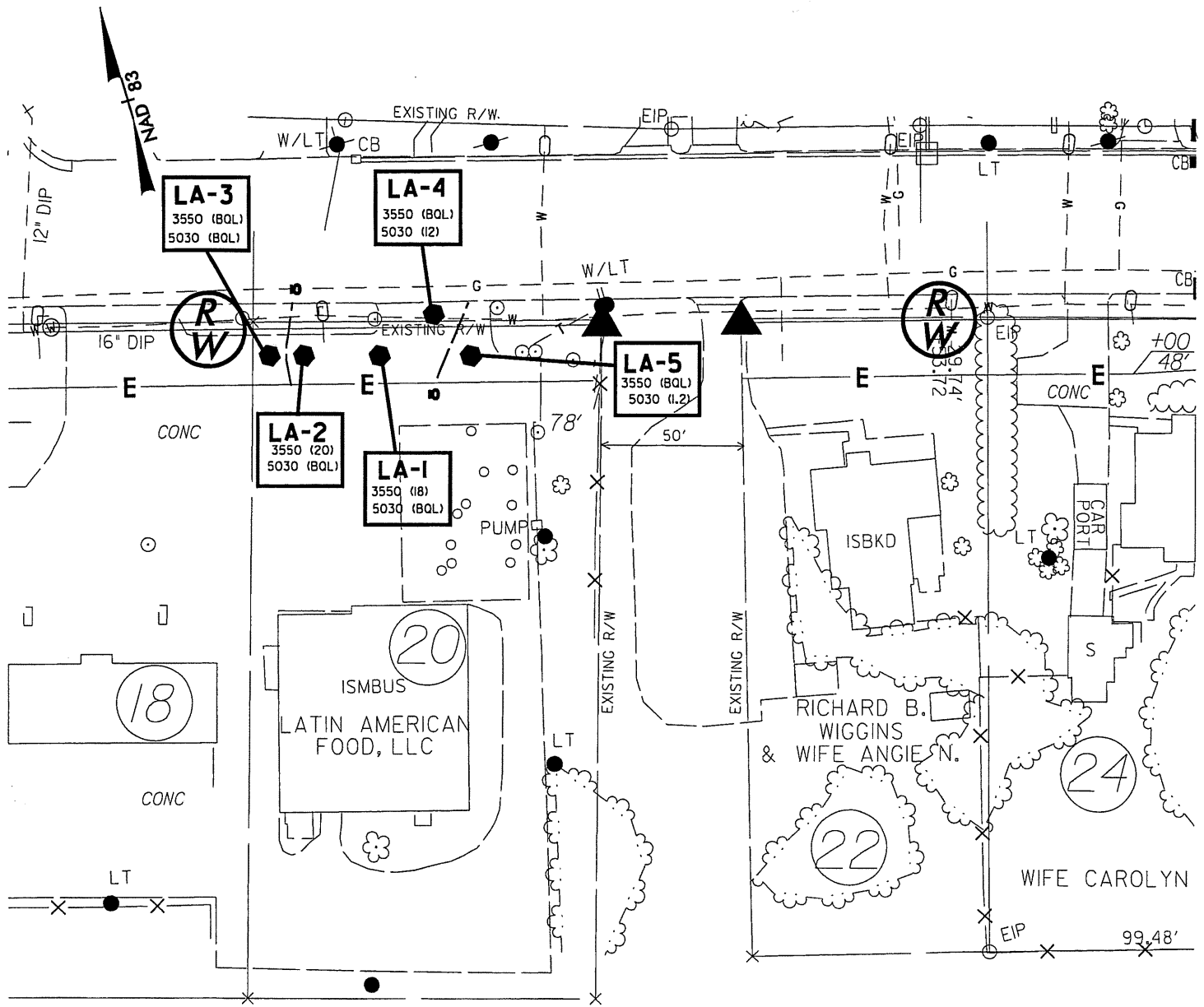
**FIGURE 2  
SITE MAP**

LATIN AMERICAN FOODS PROPERTY (PARCEL #020)  
DURHAM, DURHAM COUNTY, NORTH CAROLINA

DECEMBER 2003

71465





#### LEGEND

- SOIL SAMPLE LOCATION
- 3550 (123) TPH AS DIESEL FUEL IN MG/KG
- 5030 (123) TPH AS GASOLINE IN MG/KG
- BQL BELOW QUANTITATION LIMIT
- TPH ISOCONCENTRATION CONTOUR

0 25 50  
GRAPHIC SCALE (FEET)

## **ATTACHMENT A**



# TEST BORING REPORT

PROJECT LATIN AMERICAN FOODS (PARCEL #020)

CLIENT NCDOT 8.1352402 (U-4010)

PROJECT NUMBER 71465

CONTRACTOR REGIONAL PROBING

EQUIPMENT GEOPROBE

BORING NUMBER LA-1

PAGE 1

GPS LOCATION N35°59'23.696" W78°51'27.558"

DATE 10/22/03

DRILLE OPPER

PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			38		5" CONCRETE, MEDIUM BROWN SILTY CLAY, DRY, NO ODOR.
			318		MEDIUM TO LIGHT CHOCOLATE BROWN CLAYEY SILT, DRY, MODERATE ODOR.
5.0			1029		AS ABOVE, DRY, MODERATE ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			83		AS ABOVE, DRY, SLIGHT ODOR
10.0					BORING TERMINATED AT 8 FEET.
15.0					
20.0					

# TEST BORING REPORT

<b>PROJECT</b> <u>LATIN AMERICAN FOODS (PARCEL #020)</u> <b>CLIENT</b> <u>NCDOT 8.1352402 (U-4010)</u> <b>PROJECT NUMBER</b> <u>71465</u> <b>CONTRACTOR</b> <u>REGIONAL PROBING</u> <b>EQUIPMENT</b> <u>GEOPROBE</u>	<b>BORING NUMBER</b> <u>LA-2</u> <b>PAGE</b> <u>1</u> <b>GPS LOCATION</b> <u>N35°59'23.769" W78°51'27.778"</u> <b>DATE</b> <u>10/22/03</u> <b>DRILLE</b> <u>OPPER</u> <b>PREPARED BY</b> <u>BRANSON</u>
--	--

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			1.51		3" CONCRETE, MEDIUM BROWN SILTY CLAY, DRY, NO ODOR.
			1.51		MEDIUM TO LIGHT CHOCOLATE BROWN CLAYEY SILT, DRY, NO ODOR.
			25		AS ABOVE, DRY, NO ODOR.
5.0			78		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
					BORING TERMINATED AT 8 FEET.
10.0					
15.0					
20.0					

# TEST BORING REPORT

PROJECT LATIN AMERICAN FOODS (PARCEL #020)

CLIENT NCDOT 8.1352402 (U-4010)

PROJECT NUMBER 71465

CONTRACTOR REGIONAL PROBING

EQUIPMENT GEOPROBE

BORING NUMBER LA-3

PAGE 1

GPS LOCATION N35°59'23.811" W78°51'27.964"

DATE 10/22/03

DRILLE OPPER

PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			0.96		4" CONCRETE, MEDIUM BROWN SILTY CLAY, DRY, NO ODOR.
			1.02		MEDIUM TO LIGHT CHOCOLATE BROWN CLAYEY SILT, DRY, NO ODOR.
			1.24		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0			1.15		AS ABOVE, DRY, SLIGHT ODOR
15.0					
20.0					

# TEST BORING REPORT

PROJECT LATIN AMERICAN FOODS (PARCEL #020)

CLIENT NCDOT 8.1352402 (U-4010)

PROJECT NUMBER 71465

CONTRACTOR REGIONAL PROBING

EQUIPMENT GEOPROBE

BORING NUMBER LA-4

PAGE 1

GPS LOCATION N35°59'23.784" W78°51'27.494"

DATE 10/22/03

DRILLE OPPER

PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			28		4" CONCRETE, MEDIUM BROWN SILTY CLAY, DRY, NO ODOR.
			30		MEDIUM TO LIGHT CHOCOLATE BROWN CLAYEY SILT, DRY, NO ODOR.
			89		AS ABOVE, DRY, MODERATE ODOR.
5.0					
			2354		AS ABOVE, DRY, STRONG ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0					
15.0					
20.0					

# TEST BORING REPORT

PROJECT LATIN AMERICAN FOODS (PARCEL #020)  
 CLIENT NCDOT 8.1352402 (U-4010)  
 PROJECT NUMBER 71465  
 CONTRACTOR REGIONAL PROBING  
 EQUIPMENT GEOPROBE

BORING NUMBER LA-5  
 PAGE 1  
 GPS LOCATION N35°59'23.678" W78°51'27.327"  
 DATE 10/22/03  
 DRILLE OPPER  
 PREPARED BY BRANSON

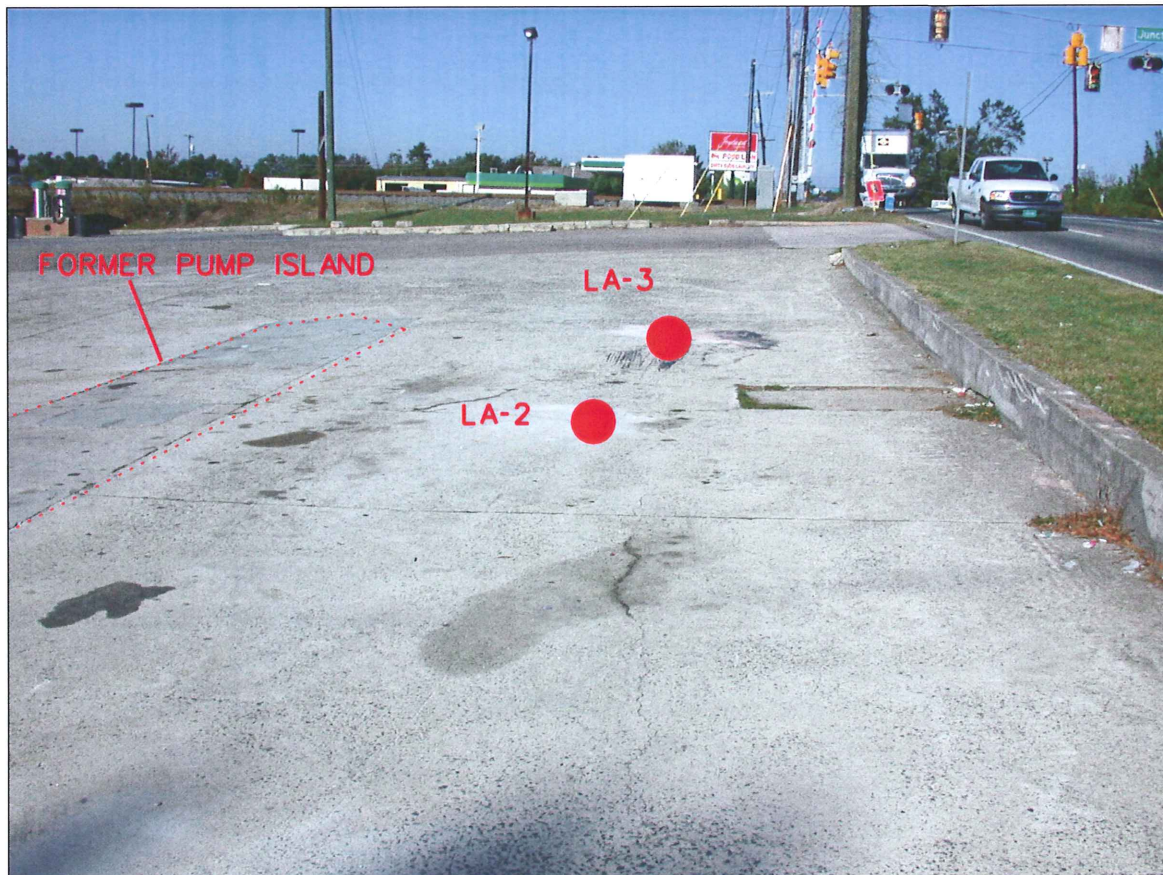
DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			17		4" CONCRETE, MEDIUM BROWN SILTY CLAY, DRY, NO ODOR.
			93		AS ABOVE, DRY, SLIGHT ODOR.
5.0			215		MEDIUM TO LIGHT CHOCOLATE BROWN CLAYEY SILT, DRY, SLIGHT ODOR.
			675		AS ABOVE, DRY, STRONG ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
					BORING TERMINATED AT 8 FEET.
10.0					
15.0					
20.0					



## **ATTACHMENT B**



LATIN AMERICAN FOODS PROPERTY (PARCEL #020)

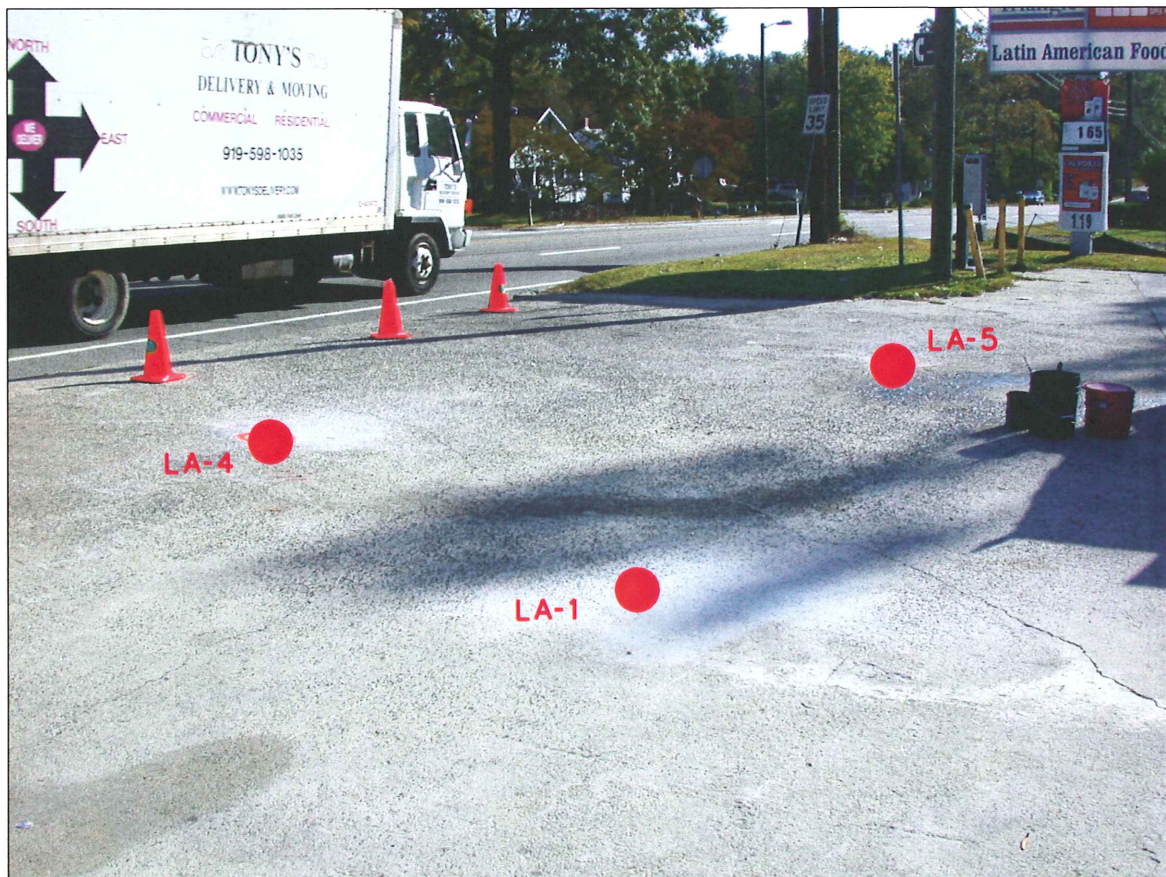


LATIN AMERICAN FOODS PROPERTY (PARCEL #020)





LATIN AMERICAN FOODS PROPERTY (PARCEL #020)



LATIN AMERICAN FOODS PROPERTY (PARCEL #020)

## **ATTACHMENT C**

# Lab Report



## Case Narrative

Date: 11/6/03

Company: Earth Tech Remediation Services  
Contact: Michael Branson  
Address: 701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Client Project ID: Latin American Foods  
Prism Log-In Group No: 3244L6

The attached Laboratory Report contains the analytical results for the project identified above and includes Quality Control Data and a Chain-of-Custody copy.

Data qualifiers are flagged individually on each sample. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Please call if you have any questions relating to this analytical report.

Data Reviewed by: Paula Gilleland  
Signature: Paula A. Gilleland  
Review Date: 11-6-03

Project Manager: Angela Overcash  
Signature: [Signature]  
Approval Date: 11/6/03

Note: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc.

F:\common\casenarrative



# Lab Report



11/6/03

Page 1 of 7

Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: Latin American Foods  
Customer Sample ID: LA-1  
Prism Sample ID: AC97925 Matrix: soil  
Login Group: 3244L6  
Sample Collection Date/Time: 10/22/03 08:15  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/30/03 03:42	EHT
SURR: GRO	79	%	34-128	8015B/5030	10/30/03 03:42	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/30/03 03:42	EHT
-----						
CALCULATIONS BASED ON DRY WT.	84	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.08g-1mL			SW846-3545	10/27/03 15:45	CWC
DIESEL RANGE ORGANICS (DRO)	18	mg/kg	10	SW846-8015B	10/28/03 21:37	JMV
SURR: o-TERPHENYL	87	%	20-151	SW846-8015B	10/28/03 21:37	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/28/03 21:37	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409

# Lab Report



11/6/03

Page 2 of 7

Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: Latin American Foods  
Customer Sample ID: LA-2  
Prism Sample ID: AC97926 Matrix: soil  
Login Group: 3244L6  
Sample Collection Date/Time: 10/22/03 08:45  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/28/03 01:53	EHT
SURR: GRO	82	%	34-128	8015B/5030	10/28/03 01:53	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/28/03 01:53	EHT
-----						
CALCULATIONS BASED ON DRY WT.	85	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.06g-1mL			SW846-3545	10/27/03 15:45	CWC
DIESEL RANGE ORGANICS (DRO)	20	mg/kg	10	SW846-8015B	10/28/03 23:52	JMV
SURR: o-TERPHENYL	79	%	20-151	SW846-8015B	10/28/03 23:52	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/28/03 23:52	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

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# Lab Report



11/6/03

Page 3 of 7

Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Latin American Foods  
**Customer Sample ID:** LA-3  
**Prism Sample ID:** AC97927      Matrix: soil  
Login Group: 3244L6  
Sample Collection Date/Time: 10/22/03      09:00  
Lab Submittal Date/Time: 10/27/03      14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	Not detected	mg/kg	1.0	8015B/5030	10/28/03 02:29	EHT
SURR: GRO	83	%	34-128	8015B/5030	10/28/03 02:29	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/28/03 02:29	EHT
-----						
CALCULATIONS BASED ON DRY WT.	88	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.11g-1mL			SW846-3545	10/27/03 15:45	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	10/28/03 20:51	JMV
SURR: o-TERPHENYL	93	%	20-151	SW846-8015B	10/28/03 20:51	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/28/03 20:51	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

# Lab Report



11/6/03

Page 4 of 7

Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Latin American Foods  
**Customer Sample ID:** LA-4  
**Prism Sample ID:** AC97928    Matrix: soil  
Login Group: 3244L6  
Sample Collection Date/Time: 10/22/03    09:15  
Lab Submittal Date/Time: 10/27/03    14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	12	mg/kg	1.0	8015B/5030	11/1/03 06:20	EHT
SURR: GRO	99	%	34-128	8015B/5030	11/1/03 06:20	EHT
DILUTION FACTOR	5	mg/kg		8015B/5030	11/1/03 06:20	EHT
-----						
CALCULATIONS BASED ON DRY WT.	88	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.08g-1mL			SW846-3545	10/27/03 15:45	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	10/28/03 20:06	JMV
SURR: o-TERPHENYL	93	%	20-151	SW846-8015B	10/28/03 20:06	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/28/03 20:06	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

# Lab Report



11/6/03

Page 5 of 7

Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: Latin American Foods  
Customer Sample ID: LA-5  
Prism Sample ID: AC97929 Matrix: soil  
Login Group: 3244L6  
Sample Collection Date/Time: 10/22/03 09:30  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
GASOLINE RANGE ORGANICS (GRO)	1.2	mg/kg	1.0	8015B/5030	10/28/03 03:06	EHT
SURR: GRO	91	%	34-128	8015B/5030	10/28/03 03:06	EHT
DILUTION FACTOR	1	mg/kg		8015B/5030	10/28/03 03:06	EHT
-----						
CALCULATIONS BASED ON DRY WT.	81	% DRY WT.	0.01	SM 2540 G	10/28/03 10:25	LT
PREP. METHOD 3545 FOR DIESEL	25.07g-1mL			SW846-3545	10/27/03 15:45	CWC
DIESEL RANGE ORGANICS (DRO)	Not detected	mg/kg	10	SW846-8015B	10/29/03 00:37	JMV
SURR: o-TERPHENYL	77	%	20-151	SW846-8015B	10/29/03 00:37	JMV
DILUTION FACTOR	1	mg/kg		SW846-8015B	10/29/03 00:37	JMV
-----						

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

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# Lab Report



11/6/03

Page 6 of 7

Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

Customer Project ID: Latin American Foods  
Customer Sample ID: QC  
Prism Sample ID: AC97930 Matrix: n/a  
Login Group: 3244L6  
Sample Collection Date/Time: 10/22/03  
Lab Submittal Date/Time: 10/27/03 14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
-------------------	----------------	-------	--------------------	---------------------	----------------------	---------

## DRO QC REPORT

xDRO-8015/MOD 10/28/03 11:35 JMV

QC DATA FOR DRO / 3550  
Batch ID: SDRO-102803  
Spiked Sample: AC97637

	True Value mg/kg	Observed mg/kg	% Recovery	Acceptance Range
Method Blank	N/A	< 10	N/A	< 10
Blank Spike	80.0	87.4	109	54-143%
Matrix Spike	80.0	75.0	95	44-147%
MS Duplicate	80.0	76.0	95	44-147%
RPD			1	< 36%

## GRO QC REPORT

xGRO/8015MOD 10/25/03 19:08 EHT

QC DATA FOR 8015 / GRO SOILS  
Batch ID: V3400-102703  
Spiked sample: AC97913

	True Value mg/kg	Observed mg/kg	% Recovery	Acceptance Range
Method Blank	N/A	< 1.0	N/A	< 1.0
LCS	2.0	1.76	88	64-124%
Matrix Spike	2.0	1.64	82	37-126%
MS Duplicate	2.0	1.59	80	37-126%
RPD			3	< 34

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# Lab Report



11/6/03

Page 7 of 7

Earth Tech Remediation Services  
Mr. Michael Branson  
701 Corporate Ct. Dr. Ste. 475  
Raleigh, NC 27607

**Customer Project ID:** Latin American Foods  
**Customer Sample ID:** QC  
**Prism Sample ID:** AC97930      Matrix: n/a  
Login Group: 3244L6  
Sample Collection Date/Time: 10/22/03  
Lab Submittal Date/Time: 10/27/03      14:45

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
-------------------	----------------	-------	--------------------	---------------------	----------------------	---------

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
Phone: 704 / 529-6364 ▲ Toll Free Number: 1-800 / 529-6364 ▲ Fax: 704 / 525-0409



Full Service Analytical & Environmental Solutions

449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543  
Phone: 704/529-6364 • Fax: 704/525-0409

Client Company Name: Charlotte

Report To/Contact Name: Charlotte

Reporting Address: Charlotte

Phone: 704/529-6364

Fax (Yes) (No): 704/525-0409

Site Location Name: Charlotte

Site Location Physical Address: Charlotte

## CHAIN OF CUSTODY RECORD

PAGE 1 OF 1 QUOTE # TO ENSURE PROPER BILLING: 1000000000

Project Name: Charlotte

Short Hold Analysis: (Yes) (No) UST Project: (Yes) (No)

\*Please ATTACH any project specific reporting provisions and/or QC Requirements

Invoice To: Charlotte

Address: Charlotte

Purchase Order No./Billing Reference 1000000000

Requested Due Date ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days ☐ 5 Days

☐ 6-9 Days ☐ Standard 10 days

Samples received after 15:00 will be processed next business day. Turnaround time is based on business days, excluding weekends and holidays.

(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

## LAB USE ONLY

Samples INTACT upon arrival? YES ☒ NO ☐ N/A ☐  
Received ON WET ICE? Temp 2.2  
PROPER PRESERVATIVES indicated?  
Received WITHIN HOLDING TIMES?  
CUSTODY SEALS INTACT?  
VOLATILES rec'd w/OUT HEADSPACE?  
PROPER CONTAINERS used?

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NELAC ☐ USACE ☐ FL ☐ NC ☐

SC ☐ OTHER ☐ N/A ☐

Water Chlorinated: YES ☐ NO ☐

Sample Iced Upon Collection: YES ☒ NO ☐

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER			PRESERVATIVES	ANALYSES REQUESTED		REMARKS	SUB LAB CERT. ID NO.	PRISM LAB ID NO.
				*TYPE	NO.	SIZE						
LA-1	10/26/03	0815	Soil	CG	2	46cc						1110
LA-2	10/26/03	0845	Soil	CG	2	46cc						1110
LA-3	10/26/03	0900	Soil	CG	7	46cc						1110
LA-4	10/26/03	0915	Soil	CG	2	46cc						1110
LA-5	10/26/03	0930	Soil	CG	2	46cc						1110
PRESS DOWN FIRMLY - 3 COPIES												
Sampler's Signature <u>M. H. H. H.</u>			Sampled By (Print Name) <u>M. H. H. H.</u>			Affiliation <u>State</u>						
Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.												
Relinquished By: (Signature)				Received By: (Signature)				Date	Military/Hours		Additional Comments:	
Relinquished By: (Signature)				Received By: (Signature)				Date	Military/Hours		Additional Comments:	
Relinquished By: (Signature)				Received By: (Signature)				Date	Military/Hours		Additional Comments:	
Relinquished By: (Signature)				Received By: (Signature)				Date	Military/Hours		Additional Comments:	
Method of Shipment: <u>NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.</u>	Log-in Group No. <u>1000000000</u>											

PRISM USE ONLY

Site Arrival Time:

Site Departure Time:

Field Tech Fee:

Mileage:

SEE REVERSE FOR TERMS & CONDITIONS

FINAL . PORT COPY

\*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)